

Part - I

Past Development Efforts, Achievements and Constraints

Introduction:

The Eighth Plan is the first plan of the democratic government formed through popular elections following the restoration of democracy brought about by the historic people's movement of 1990. In this context, the perspectives of this plan are based on two principal contradictory factors. These factors consist of, on the one hand, the positive aspects of the new aspirations and enthusiasm among the general public and, on the other, the negative aspects of the legacy of economic depravity left behind by the panchayat regime.

The present challenge of the plan is to strike an effective balance between the ever growing needs and rising expectations of the rapidly increasing population and the limited available financial and natural resources. This challenge has been further compounded by the degradation of natural resources and environment. These circumstances naturally call for political discipline, thrift and economic sacrifices. Under these trying conditions, too, the great expectations and enthusiasm obtaining among the people can serve as a primary source of energy for the process of economic modernization.

During the period prior to the restoration of democracy, a three year plan and five year Plans were formulated and implemented. Thus, despite the intention of developing the nation rapidly through the utilization of planning as a development tool, the economy could not achieve the desired progress. One of the primary factors for this was the inability to clearly establish an interrelationship among the goals and among the objectives, priorities, strategies and programmes of the plans. This led to the establishment of a tradition of adopting a new goal prior to the accomplishment of a previous one. Hence, there appeared to be a lack of continuity and long-term analysis in the process of selection and identification of goals. The selection of strategies and priorities, too, reflected similar drawbacks and in spite of the considerable investment made during the period, no desired progress was achieved. The distortions in policy matters, strategies and programmes as well as the weakness in implementation evolved as the characteristic features of the then periodic development planning process.

An evaluation of the major economic and physical indicators during this period presents a gloomy picture. Although during the panchayat regime progress was made to a certain extent in areas like transportation, communication, health, drinking water, literacy and the ratio of student enrolments, but the economic achievements were vague and disappointing on the whole. No economic changes were brought about in the life style of the majority of the population. About in the life style of the majority of the population. The economic condition of some segments of population deteriorated even further.

An analysis of the economic changes brought about by the planned development efforts in the past is presented below.

Economic situation:

1. Gross Domestic Product:

Owing to the low growth rate in Gross Domestic Product in comparison with the high growth rate in population, the per-capita income recorded only a marginal increase during the period 1964/65 to 1989/90. During this period, the average annual growth in GDP was 3.4 percent whereas the growth in per capita income was a mere 0.8 percent. In absolute terms, the per capita income reached Rs. 1,605 in 1989/90 as against Rs. 1,304 in 1964/65. Thus, in a period of 26 years, the increase in per capita income was merely Rs. 301 at 1974/75 prices. As a result of the low growth rate in per capita income, Nepal happened to stand low even among the poorest nations of the world. At constant prices the GDP had increased by 3.4 percent during the period the GDP had increased by 3.4 percent during the period 1964/65 to 1989/90 by recording the growth rate of 3 percent in agricultural sector and 3.8 percent in non-agricultural sectors. In the past, especially during the seventh plan period (1985-1990), it was estimated that there had occurred an unprecedented growth in agricultural production. In reality, records of cultivated areas previously left out were adjusted after cadastral surveys which led to an increase in the crop farming area giving rise to inflated estimates of agricultural production. Thus, the growth in GDP during this period appeared to be unrealistically high. Efforts are currently underway to rectify this situation. If the aforementioned unrealistic growth were excluded, the growth rate in per-capita income during the seventh plan would be considerably lower.

As a result of the low economic growth rate and the widening economic and income disparities, a process to push many more people below the poverty line was intensified. Various studies have been conducted for the purpose of quantifying the people living below the poverty line in Nepal. These studies have estimated that 40-60 percent of the populations are living below the absolute poverty line. According to the National Planning Commission estimates based on the assessment of available data, the percentage of the people living below the poverty line is put at about 49 percent. Thus, a large segment of population is deprived of the basic necessities of life.

There had been no marked changes in the economic structure until the fall of the panchayat regime. The share of the agricultural sector in GDP was 65.1 percent in 1964/65, which recorded a slight downward trend by reaching 61 percent in 1989/90. While the share of the non-agricultural sector in GDP ought to have grown commensurate with industrialization in the course of development, it is estimated to have recorded merely 39 percent in 1989/90, by recording a low growth rate as against 34.9 in 1964.65. Thus, it is evident that there were no substantial improvements in the macro economic structure of the country. In addition, the mode of production continued to be traditional. Due to the lack of growth in employment opportunities in non-agricultural sectors, the labour force subsisting on agriculture could not be transferred to other sectors. The reliance of the growing labour force on agricultural pursuit where labour productivity was already low led to a further decline in per capita production in agriculture. The problem has been further compounded by the fact that the agricultural labour force has to rely excessively on the monsoon.

Foodgrain production which stood at 3.152 million metric tones in 1961/62 reached only 5.698 million metric tones in 1989/90 with an average growth rate of 2.1 percent per annum only. This increase, again, was due mainly to the expansion in the agricultural land rather than an increase in productivity or the use of agricultural inputs. The efforts of this period were insufficient even to maintain past levels of average per capita agricultural production. The per capita food grain availability was diversely affected owing to the low growth rate in food grain supply in comparison to the growth rate in population. In the irrigation sector, too, only 550,467 hectares of land had access to irrigation facility by 1989/90 which comprised only 21 percent of the total land under cultivation.

Notwithstanding the encouragement provided for the development of the industrial sector in the past, this sector remained in its rudimentary stage. The share of the manufacturing sector including cottage industries stood at about 5 percent of GDP and provided employment to only about 2 percent of the total labour force. The sector lacked dynamism and was unable to establish the kind of growth which induces forward and backward linkages with other sectors of the economy. Although the growth rate of this sector in general has been marginally higher than that of the economy as a whole, some industrial units prospered as a result of protectionist policies. This is, however, incompatible with the general trends towards economic liberalization. Capacity utilization in industries, profit yielding and investment with value added activities were slake. No sub-sector under the industrial sector was able to attract either domestic or foreign investors.

2. Investment and savings:

In order to enhance the production capacity of the national economy it is essential to channelize an increased share of GDP to investment. Again, to increase the quantum of investment, there had to be a concomitant reduction in consumption expenditure and increase in gross domestic savings. Instead, the total consumption expenditure during the past 16 years rose from 90 percent of GDP in 1974-75 to 93.9 percent in 1989.90. This was mainly due to the increase in government expenditure from 7.6 percent of GDP in 1974/75 to 11.5 percent. As a result of the increase in the consumption expenditure, there occurred a decline in gross domestic savings by 3.9 percent, thus bringing down the percent to 6.1 in 1989/90. This evidently led to increasingly heavy reliance on foreign savings in order to bear the burden of the increased investment. While the gross investment comprised foreign assistance to the extent of 4.5 percent of the GDP in 1974/75, this reliance was estimated to have gradually risen and reached 12 percent in 1989/90.

3. Government Financial Situation:

There were some policies formulated in the past for necessary mobilization of internal resources, optimum utilization of internal as well as external resources, control of unproductive expenditure and maintenance of fiscal discipline etc. However, the erstwhile government was unable to adhere to those policies. Consequently, this gave rise to anomalies and distortions in the economy and, in turn, adversely affected the pace and structure of economic development.

3.1 Development Expenditure:

The total development expenditure outlay in fiscal year 1961/62 was Rs. 86.2 million. The development expenditure increased with an average growth rate of 19.7 percent per annum from Rs. 608.6 million in 1972/73 to Rs. 12,997.5 million in 1989/90. Converted to figures at constant prices using urban consumer price index (1972/73 = 100), the development expenditure from 1972/73 showed an average annual growth of only 9.1 percent, by recording a total expenditure of Rs. 2677.2 million in 1989/90. As a percent of GDP, the total development expenditure stood at 5.5 percent at current prices and 4.6 percent at constant prices in 1972/73, and to 14.3 percent at current prices and 8.8 percent at constant prices in 1989/90.

3.2 Sources of Financing Development Expenditure:

An expansionary policy, especially on internal and external expenditure and borrowings, was adopted during this period. The growth rate in the past years in internal resources as a financing source for development expenditure stood at 16.4 percent at current prices and 6.1 percent at constant prices. These growth rates were insufficient to cope with the increasing development expenditure. Consequently, this led to an increased and heavy dependence of the economy on foreign aid.

a. Revenue Surplus:

During the period between 1972/73 and 1989/90 the revenue increased at the rate of 17.3 percent at current prices and 6.9 percent at constant prices. A structural analysis of the revenue reveals that it depended entirely upon traditional sources of revenue, as new revenue sources were not tapped. The contribution of taxes to GDP stood at 2.3 percent at constant prices from indirect taxes and 0.8 percent from direct taxes in 1972/73, which rose to 4.0 percent and 0.9 percent respectively in 1989/90. In the past years the regular expenditure recorded an unprecedented high growth. The regular expenditure increased by 18.4 percent at current prices and 7.9 percent at constant prices during the period from 1972/73 to 1989/90. The regular expenditure compared to GDP was 6 percent at current prices in 1972/73, which reached 7.3 in 1989/90. Thus, at constant prices the regular expenditure recorded as growth from 2.8 percent in 1972/73 to 4.5 percent in 1989/90.

A detailed analysis reveals that there occurred a fundamental directional change in regular expenditure from the fiscal year 1974/75. There was an accelerated growth in the expenditure in defence, internal security and debt servicing. Consequently, the share of the regular expenditure in economic and social sectors showed a decline in the total regular expenditure. This phenomenon corroborates the fact that the economy is increasingly becoming dependent on loans and the flow of financial resources channeled directly towards economic and social services for development is very much limited. In addition, the expenditure under the economic services for the maintenance of physical infrastructures, which were created with large investment, remained low.

All these factors hindered a substantial growth in revenue surplus. The revenue surplus stood at 2.8 percent of gross domestic product at current prices in 1974/75 and 2 percent in 1972/73 at constant prices. This figure remained at 2.9 percents at current prices and 1.8 percent at constant prices in 1989/90.

b. Deficit Finance:

Thus, the mobilisation of deficit finance became an important tool of resource mobilisation due to the decline in the revenue surplus and the lack of optimum utilization of foreign aid. The rate of growth in deficit financing from 1972/73 to 1989/90 was 18.4 percent at current prices and 7.9 percent at 1972/73 constant prices. The share of deficit finance in gross domestic product, which stood at 0.9 percent in 1972/73, increased to 1.7 percent in 1989/90 at 1972/73 constant prices. Furthermore, due to the relatively simpler loan procedures of the banks, internal loans were mostly obtained from the banking sector. This, however, led to a further rise in the price level prevailing in the economy.

c. Foreign Assistance:

Due to limited internal revenue mobilisation, there was a growing reliance on foreign assistance for development expenditure. There appeared there significant trends in foreign assistance during this period. Firstly, there was a gradual increase in the share of foreign assistance in the development expenditure. While the foreign assistance contributed 37.4 percent of total development expenditure in 1972/73, the figure increased to 61.1 percent in 1989/90. Secondly, the foreign assistance received by the country recorded a progressive decline in grant assistance and a commensurate increase in loans. While loans constituted only 20.8 percent of total foreign assistance in 1972/73, the percentage rose to 75.1 in 1989/90. This resulted in an increased burden on the economy of the payment of foreign debts and their interest. Thirdly, compared to the amount of loans sanctioned by foreign donor countries and agencies, their actual utilisation remained considerably low.

Thus, the rapid growth in net foreign debts led to an increased burden on the economy. While the outstanding foreign debt obligation stood at Rs. 173.4 million (US\$ 17.1 million) in 1972/73, i.e. 1.6 percent of gross domestic product, Rs. 36,800.9 million (US\$ 1260.3 million) i.e. 40.5 percent of gross domestic product. If the internal loans are added to this figure, the total debt obligations as of 1989/90 reached Rs. 38,957.9 million (US\$ 1334.2 million) from Rs. 223.4 million (US\$ 22 million) in 1972/73. Thus, the debt obligations increased from 2.0 percent in 1972/73 to 42.9 percent of gross domestic product in 1989/90.¹

Due to the expansionary fiscal policies adopted during this period, the gross expenditure recorded and average annual growth rate of approximately 17 percent from fiscal years 1964/65 to 1989/90. The level of total expenditure in gross domestic product was at 5 percent in 1964/65, which reached 22 percent in 1989/90. On the other hand, during the same period, the share of revenue in gross domestic product reached to only 10 percent from 3 percent. Consequently, the gap between revenue and expenditure reached as high as 12 percent from 3 percent. This led to an increased dependence on internal and external borrowings.

Thus, the existing state of government finance clearly reflects its gradual weakening over the years. Due to insufficient mobilization of internal resources, there occurred a rapid growth in debt servicing obligations commensurate with the increase in foreign assistance. The obligations of the payment of foreign debts and interest exceeded the rate of gross government revenue earnings. Although there were substantial increases in foreign aid commitments, due to a low disbursement ratio, there was a big increase in undisturbed amounts. At the same time, due to a system which implemented projects identified and formulated with a heavy input of foreign advisers and implemented in the influence of commission agents rather than influenced by the nation's needs, whatever resources were utilized could not provide direct and substantial benefit to the people and thus the system led to an increase in the burden of foreign debts. As the return from the investment in the economy were not obtained in time, the foreign aid, too could not be fully utilized owing to the inability to sustain the counterpart expenditure estimated to be at 1=0.22 required for the utilization of the foreign aid during the Seventh Plan period.

4. Monetary and Credit situation:

Money supply increased at an average annual rate of 15.6 percent during the period from June/July 1962 to June/July 1990. The main factors for the increase in money supply was due to the increase in foreign assets by 14 percent and in internal borrowings by 26.1 percent. During the same period, while the private sector loans increased by 21.3 percent, the government sector borrowing recorded a growth of 28.5 percent. These factors limited, to a certain extent, the activities of the private sector.

During this period, a contraction in the money supply was caused by large increase in time deposits and the gradual growth of capital and other items. On an average, the time deposits increased by 24.7 percent per annum and the increase in net capital and other liabilities was 35.2 percent.

During this period, as shown by the review, money supply (M₂) recorded an average annual growth of 17.7 percent. The review also showed that while the increase in money supply in the initial years was mainly caused by foreign assets, the same in the subsequent years was caused by excessive internal borrowings.

The level of resources and their utilization in the commercial banks increased on an average by 22.1 percent per annum from Rs. 92.9 million in June/July 1962 to Rs. 24,759.3 million in June/July 1990. Among the sources of financing for Commercial Banks, the total deposits recorded an average annual growth rate of 22.2 percent and reached Rs. 21885 million from Rs. 79.3 million during this period, the current savings, and fixed deposits showed an annual increase of 17.8, 27.3 and 23.8 percent respectively.

The bank loans and investment, which were primarily confined to private sector only until June/July 1962, reaching in aggregate Rs. 18,917.1 million. Thus, the average annual growth in loans and investment during this period was 23.0 percent. As regards the borrowings of government sector, there occurred an annual growth of 32.2 percent from 1964/65 to 1989/90. The excessive growth in government expenditure particularly during the later years of review led to a rapid increase in borrowings of the government and private sectors. The loan disbursement ratio of the commercial banks which stood at 60.6 percent in June/July 1962, steadily rose to 70.1 percent in June/July 1990. Joint credit extension of Agricultural Development Bank, Nepal Industrial Development Corporation and Employees Provident Fund increased to Rs. 1580.1 million from Rs. 241.1 million recording an increase of 13.4 percent per annum between

¹ In the conversion of Nepalese Rupee to the US dollar, the conversion rate used for fiscal year 1972/73 is the average of the buying and selling rates i.e. Rs 10.15=US\$ and for 1989/90 Rs. 19.20 = 1US dollar.

the period 1974/75 to 1989/90. Despite the insignificant success in the realization of principal in comparison to credit extension, the loan realization has increased at 16.8 percent per annum during this period. While loan realization in comparison to loan disbursement was 37.2 percent in 1974/75, the overdue portion of the outstanding loan gradually increased to 58 percent in 1989/90. While the unrealized loan stood at Rs. 405.1 million in 1974/75, it increased to Rs. 543.1 million in 1989/90 at a rate of 18.9 percent per annum.

Out of the total credit extension of Rs. 1014 million by the commercial banks for the different uses of the private sector in 1974/75, consumable and social uses was 48 percent, trade 45.5 percent, industry 5.1 percent and agriculture and other use 1.4 percent. Following the change in investment pattern, out of the total credit extension of Rs. 11,798.7 million in 1989/90, the investment in industry, trade, consumable and social uses, agriculture and other uses was 32.3 percent, 28.6 percent, 23.8 percent, 13 percent and 2.3 percent respectively. The loan disbursement of the commercial banks increased at 17.8 percent per annum during this period.

5. Price situation:

During the period of the base year 1972/73 to 1989/90 the national urban consumer price index increased at an average of 9.2 percent per annum. The price of food and beverages increased at 9.8 percent whereas the price of non-food goods and services increased at 9.6 percent during this period. There was tremendous pressure on price due to internal and external reasons during this period. Rise in oil price at the international level, worldwide price increase of development and construction materials and consumable goods, increased cost in internal production and transportation, recession in internal production were the main factors responsible for price increase.

Besides, there was tremendous pressure on price following an increased money supply at an average of 21 percent per annum because of the big increase in government expenditure during the seventh Plan (1989-90) Period. In addition to this, the main causes of price increase were the increased cost of goods and services produced by corporations, rise in international price of petroleum products, industrial raw materials and other goods, change in foreign exchange rate and decline in production of the non-agriculture sectors – due to trade and transit impasse between Nepal and India etc.

6. Foreign Trade and Balance of Payments Situation:

6.1 Foreign Trade:

An analysis of the data of the past years (1962-1990) reveals that the situation of foreign trade of the country was not in a good shape. Export at current price had increased at an average of 11.2 percent per annum during this period while the import had increased at 14.2 percent during the same period. Total trade deficit during this period had increased at an average of 16.6 percent per annum due to a limited export base in comparison to import.

Although considerable success was achieved in country wise diversification of trade for bringing about changes in its traditional situation, no significant achievement was made in achieving trade balance by increasing the volume of export through product-wise diversification. The increase in the internal demand for agricultural products commensurate with the increase in population caused a decline in the surplus for export. Furthermore, the level of export development remained weak due to the low level of industrial production and the continued dependence of agricultural production on weather conditions, too.

The trade deficit with India increased from Rs. 186.3 million in FY 1961/62 to Rs. 3,979.7 million in FY 1989/90 in spite of the fact that the share of India in the total foreign trade of the country had started decreasing and the share of overseas countries had increased as a result of efforts towards diversification of trade in the past years. Similarly, although the trade with overseas countries was worth Rs. 7.1 million in FY 1961/62, the trade deficit continued to increase and reached to Rs. 9186.3 in FY 1989/90 while the share of India in the total foreign trade of Nepal was 97.7 percent during FY 1961/62 this recorded a gradual decrease to 22.7 percent only in FY 1989/90. During the same period, the trade with overseas countries increased to 77.3 percent from 2.3 percent. Similarly, while the shares of export and import trade with India stood at 95.5 percent and 98.9 percent respectively in 1961/62, they gradually declined over the years to 12.7 percent and 25.2 percent respectively in 1989/90. The trade and transit impasse between Nepal and India made 1989/90 an abnormal year, which also contributed to the trade with India drop to its lowest that year. Besides, the main reasons for the gradual decrease in trade with India in the previous years were the decline in surplus of traditionally exported agricultural products for export due to their increased internal demand and the country-wise diversification in import of daily consumer goods, construction materials and industrial raw materials from other countries following the expansion of trade with them.

In the context of the trade structure of the country during this period, while the foods and raw materials constituted an important place in export in the initial years, the industrial finished products replaced them following their substantial reduction in the later years especially during the seventh plan period. Recording a gradual increase, the share of finished products increased to 82.9 percent of the total export in FY 1989/90. While jute and jute goods, rice, pulse and timber were main exportable in the initial years, the industrial finished products such as the woolen carpets and readymade garments became main exportable in the later years.

As regards the trade structure of import, the shares of foods and raw materials, industrial goods and other materials in the total import in FY 1961/62 were 39.9 percent, 59.5 percent and 0.8 percent respectively. There was predominance of industrial goods in the total import in FY 1989/90. The components of industrial goods and foods and industrial raw materials in the total imports in that year were 71.3 percent and 28.7 percent respectively.

Some efforts of export promotion and the creation of some institutional bases over the past years helped achieve some success in country-wise diversification of export trade. However, no real increase in export volume could be materialised due to the lack of sustainable and sound bases through product diversification. During the early 10 year period of the panchayat regime, there was predominance of agricultural goods such as cereals and jute in the field of export and following the gradual decline in export of these goods, the industrial goods such as woolen carpets and readymade garments occupied the prominent place in the later years.

Overseas import increased considerably due to the country-wise and product-wise diversification of import during this review period. While the share of import was 13.1 percent in the gross Domestic product (GDP) in FY 1964/65, it gradually increased to 20.2 percent in FY 1989/90. The export, however, showed only an insignificant increase during the same period. The share of export in GDP stood at 7 percent in 1964/65, which declined to 5.7 percent only in 1989/90.

6.2 Balance of payments situation:

The foreign trade and balance of payment situation was used to be taken in isolation till 1970. Later from 1975 onwards it was felt that the foreign trade and the balance of payments situation needed to be coordinated with other aspects relating to monetary, fiscal, foreign exchange and production of the country and due attention should be paid to the close interrelations among them while formulating the economic policy. National policy relating to the foreign trade and balance of payments situation was formulated for the first time in the sixth plan (1980-85) to orient the foreign trade towards a specified direction in order to maintain the increased foreign trade of the country and the growth of the domestic market and to minimize the increasing trade deficit. Thus, it became the foreign trade toward a specified goal of the economy during the first decade of the panchayat regime. Though the history of foreign trade of Nepal is long, the data relating to balance of payment being available only after 1974/75, the situation analysis is possible only of the years thereafter.

The balance of payment situation of the country was favorable for the period between 1974/75 and 1989/90 except for the three years between 1982/83 and 1984/85. There were deficits of Rs. 675 million, Rs. 126 million and Rs. 866 million respectively in all these 3 years in spite of the increase in foreign aid. The main reasons for the balance of payment to be unfavourable to the country during these years were the reduction of total export and the excessive increase in import resulting in great trade deficit. Current account deficit increased considerably in all three years.

Balance of payment surplus increased to Rs. 2,649.6 million from Rs. 355.2 million with an average increase of 14.3 percent per annum during the review period. Trade deficit increased to Rs. 13186.2 million from Rs. 925 million recording an average increase of 19.4 percent during the same period. While balance of payment surplus had increased by 7.5 times in 1989/90 in comparison to 1974/75, trade deficit had increased by 14.3 times. Similarly, current account deficit increased at 32 percent per annum or by 64.5 times in 1989/90 in comparison to 1974/75. As a result, the ratio of current account deficit and GDP increased intensely. While, this ratio was about 1 percent in 1974/75, it increased to 8.5 percent in 1989/90. The main cause for this intense increase of current account deficit amount was the considerable increase in trade deficit.

There occurred an excessive flow of foreign loans to bring down balance of payment deficit to a favourable situation in the years past. Though this was a short term expedient to make up current account deficit amount, this was not a reliable and sound way out in the long run, as it was certain that the economy itself will have to face serious consequences in the future due to the burden of the foreign debt loan. There was a great increase in the foreign debt in the years past.

There was much pressure on balance of payments situation on account of increasing current account deficit each year due to a slow growth in income from services and transfers during this period. As such, income was not able to cope with the intensely increasing trade deficit. While net income from services in 1974/75 was Rs. 280.8 million, this increased to Rs.2,613.2 million in 1989/90 with an average increase of 16 percent per annum. Similarly, net income from transfers in 1974/75 was Rs. 523.9 million. This increased to Rs. 2,818.9 million in 1989/90 registering an average increase of 11.9 percent per annum.

7. Foreign Exchange Situation:

The foreign exchange reserves situation was favorable on the whole during the period of July 1961 to July 1990. While there was foreign exchange reserves of Rs. 206.9 million in July 1961, this increased to Rs. 11,984.6 million in July 1990 with an average increase of 15 percent per annum. Out of total foreign exchange reserves, while the percentage of gold, I.M.F. tranche, and S.D.R. was 6.8, convertible foreign exchange 35.6 in July 1961, this percentage changed to 3.5, 78.8 and 17.7 respectively in July 1990 following a gradual change in the composition. While there was predominance of non-convertible foreign exchange in the total foreign exchange reserves during the initial years. This underwent a gradual change and the convertible foreign exchange began to gain predominance in July 1990.

The reserves in convertible foreign exchange reached Rs. 9441.9 million (US\$ 323.4 million equivalent) in FY 1989/90 from Rs. 73.7 million (US\$17.9 million equivalent) in July 1961 recording an average increase of 18.2 percent per annum in the past. Similarly, the savings in non-convertible foreign exchange reached Rs. 2118.1 million (US\$ 72.5 million equivalent) from Rs. 119.2 million (US\$ 11.7 million equivalent) following an average increase of 10.4 percent per annum during this period. Taking into consideration the reserves of both convertible and non-convertible currencies together, while it could meet the import for 5.8 months in FY 1960/61, it was capable of meeting 7.6 months' import in 1989/90. Thus, though there was a considerable increase in foreign currency reserves during this period, development of a regular and sustainable source of foreign exchange increased due to excessive flow of foreign loan and grants and as these are not reliable sources, a situation persisted where there was the possibility of drastic reduction of the reserves.

Physical progress situation:

1. Agriculture, Forest and Irrigation

1.1 Agriculture:

Much importance was attached to cereal crops production programme during the periodic plans in the past with the objective of increasing agricultural production and productivity. Considering the development of institutional infrastructures during the past period and also the priority accorded in the allocation of development expenditure to meet the above objective, the achievements made in the agricultural sector in respect of production and productivity appeared to be far from satisfactory. During the period of 1961/62 and 1989/90, while the area covered by the cereal crops increased at the rate of 2.2 percent per annum, production of principal cereal crops increased at an average of 2.1 percent per annum. The productivity, thus decreased by a rate of 0.1 percent. It became clearly evident that the contribution of the increased area was pivotal to whatever increase took place in production growth. Similarly, the area, the production rate and the productivity rate of cash crops increased by 1.8 percent, 5.1 percent and 3.3 percent respectively over the period.

1.2. Forest:

Massive expansion of organizational structures in the forest sector was carried out in order to conserve the forest area and arrange the supply of forest products during the past period. While forest development works in the hill and terai were being undertaken through a total of 22 forest divisions and 7 circle offices in 1965, forest offices in all the 75 districts, regional offices in all the regions and more than 200 ranger offices were set up by the year 1990. Similarly, the number of technical manpower was considerably increased during this period.

Tree plantation in 2,454 ha. of land, construction of 840 km. of forest roads and 448 km. of fire lines were carried out in F.Y 1964/65. The available data reveals that the tree plantation was done in 99137 ha. of land or 40 times more in comparison to what was achieved in F.Y. 1964/65. Hence, though it was claimed that massive expansion of institutional bases of the forest sector and tree plantation works was undertaken during this period, the present dilapidated situation of the forest vindicates the fact that due attention was not paid towards forest conservation, promotion and utilization. Though legal frameworks were constituted for conservation, promotion and utilization of forest during this period, forest protection could

not be undertaken in an effective manner due to weak and inefficient implementation. The forest sector became the major source of personal income for the cunning and shrewd people. Forest determination took place intensively during this period. This adversely affected the environment as well as the climate of the country. According to available statistics, while the forest coverage was 6,402,000 ha. in 1964, this was reduced to 6,306,000 ha. by the end of F.Y. 1985/85.

1.3 Irrigation:

Before the advent of the panchayat system, the irrigation facility was only available to 11,428 ha. of land. It was estimated that irrigation facility was available to about 21 percent of the cultivated land by 1989/90 with the availability of additional irrigation facility to a total of 539,039 ha. of land during the panchayat regime as a result of heavy investment in the irrigation sector during this period. Though emphasis was given on the development and expansion of the irrigation sector in the past periodic plans, its implementation part could not be effective. The economy could not derive maximum benefit from the huge investment made in the irrigation sector. The expected benefits were not forthcoming from several projects on their completion and there was lack of attention in due time towards proper repair and maintenance of completed projects.

2. Industry, Tourism and Electricity

2.1. Industry

Though the industries grew in numerical strength during the review period, actual growth in production could not materialize in real terms due to the prevalent circumstances of the past. The contribution of the industrial sector (including cottage industry) to the gross domestic product was about 5 percent and employment available to about 2 percent of the total employment available to about 2 percent of the total labour force. During the period of three decades, the development of industry remained at the rudimentary stage and could not gain momentum.

Industrial production showed an average increase of 7 percent per annum from the analysis of the production index of 18 principal industrial products from the period 1974/75 to 1989/90. While the production of Jute goods decreased at an average of 6 percent per annum during the period, the production of agricultural tools and bricks and tiles decreased at 4.1 and 1.8 percent respectively. Similarly, there took place only a slow growth in products directly associated with the needs of the society such as cement, sugar, cotton merchandise, matches, there occurred a considerable growth in consumable products like liquor, beer, synthetic cloth, soap, shoe and biscuit.

The capacity utilization of some selected industries was about 63 percent during the period from 1975/76 to 1989/90. The capacity utilization of jute goods and beer industries was above 70 percent. Similarly, the capacity utilization of sugar and cigarette industries was 69 and 66 percent respectively. But the same of the cement, brick and tile and match industries remained less than 60 percent.

While the contribution of the cottage industry to the gross domestic produce was 1.4 percent in 1974/75, this declined to 0.7 percent in 1989/90. The development of the cottage industry could not be oriented towards a correct direction in the past while Rs. 9.6 million was invested in 1974/75 following the registration of 70 cottage and small industries, a sum of Rs. 828.6 million was invested in 1989/90 with the registration of 932 cottage and small industries.

Hence, the pace of development of the industrial sector was slow in the past. The industrial policies of the past had emphasized the creation of industrial environment to increase the contribution of the industrial sector to the economy by infusing momentum into this sector. But the flow of investment could not be channeled to industries with long term benefits due to the lack of proper implementation mechanism, procedural constraints and administrative delay. Due to the distortions arising out of industrial protectionism there could not be created a favourable environment for increasing the investment in nationally important industries related to production, employment and income distribution. The large investment of the private sector in industry was greatly attracted to the activities yielding quick and easy return. There were no incentives to attract investment towards industries directly associated with the need of the society. Due to this, forward and backward linkages of the economy with other sectors could not be developed. The government policy instead of being incentive oriented was control oriented to attract the foreign investment. On the whole, the government policy could neither act as a catalyst nor contribute in leading the country towards industrialization.

2.2 Tourism

While 7,750 tourists came to Nepal in F.Y. 1961/62, this number reached 246,361 in 1989/90 with its average annual growth rate of 13.1 percent. While in the beginning the Kathmandu valley alone was the

centre of attraction, a substantial increase in the number of tourists took place during this period due to the extension of trekking, mountaineering, national parks and other places of touristic attraction outside the valley. Despite the increase in the number of tourists during this period, no increase in average stay and expenses incurred per day materialized for the lack of proper development and expansion of infrastructures and places of tourist attraction. While the average stay of a tourist was 13.1 days in 1974/75, this went down to 12 days in 1989/90. Similarly, while each tourist during his stay in Nepal spent \$ 24.00 in 1961/62, the level of expenditure remained unchanged in 1989/90.

Substantial foreign exchange was earned from the tourist sector during the period from 1961/62 to 1989/90. While the earning from the tourist sector was merely US\$ 78,000.00 in 1961/62, US\$ 68,343,000.00 was earned in 1989/90 with an average increase of 26 percent per annum.

2.3 Electricity

Upto 1960, the total generation capacity of electric power in the country was 7.03 Mw. Out of this, 2.077 Mw. Was generated from the hydropower stations and 4.953 Mw. From the diesel plants. In the period between 1961/62 and 1989/90, some other small projects and big hydro-electric projects such as the panauti, Trishuli, sunkosi, Devighat, Gandak, Kulekhani and Marsyangdi were commissioned. By the end of 1989/90, the total generation capacity including hydro and diesel in the country was 227.084 Mw. While about 1 percent of the total population had access to electricity in 1960/61, 8.8 percent of the population could enjoy this facility by the end of 1989/90. Thus, though electricity generation and distribution was increased, the burden arising from the excessive per unit cost of electricity due to completed projects being very expensive fell upon the consumers.

3. Transport and Communication

3.1 Transport

a. Roads

Prior to 1950, the facility of motorable road in the country was almost non-existent. A review of the situation shows that the road available all over the kingdom in 1960/61 was 1198 km., out of which 339km. was metalled and 859 km. fair weather road. Upto the end of FY 1989/90, 7,330 km. of road facility was available in the country out of which 2,958km. was black topped, 1,658km. graveled and 2,714 km. fair weather road. While looking at the road-population ratio, every kilometer of road had served a population averaging 7,780 people in 1960, upon the reduction of this ration on 1989/90, every kilometer served a population of 2441. The important highways built in the period of past thirty years are the east-west highway, Arniko highway, Siddhartha highway, Prithibi highway, Gorkha-Narayangadh highway, Dadeldhura-dipayal-Doti highway, Dharan-Khankuta highway, Dhangadi-dadeldhura highway. In addition to these, some efforts have also been made in the construction of suspension bridge, wooden bridges, foot trail, mule track and service track etc. which constitute the minimum basic needs for the development of the rural areas.

Thus, in spite of the efforts made for the development of road transport, several of the district headquarters do not have access to road. The construction of roads could not be completed as required nor could the economy derive maximum benefits from the constructed roads because of the excessive increase in the cost of road construction and the lack of timely repair and maintenance.

b. Air Transport

Prior to 1960AD, the country had a total of 12 airfields with 1 metalled and 11 fair weather type. Necessary physical facilities and communication services complementary to aviation were unavailable in several air-fields.

In FY 1974/75 there was a total of 28 air fields, all over the kingdom with 4 metalled, 12 fair eather and 12 small airstrips. By 1989/90 the number of total air fields reached 43. The internal air service has been operated by Royal Nepal Airlines corporation. In 1960/61, this corporation had initiated its service with 6 aeroplanes. In FY 1989/90, this corporation had 24 aeroplanes and it operated its services internally in 36 places and externally in 10 cities.

Long before 1960, railways and ropeways were established in Nepal. Till FY 1960/61 Nepal had 99 km. of narrow gauge railway and 23km. long ropeway linking Hetauda and Kathmandu with a capacity to carry 25 Tons of material per hour was constructed and service of trolley bus between Kathmandu and Bhaktapur covering a distance of 13 km. was brought into operation. Thus, no specific progress was achieved in the development of other types of transport during this period. As far as the railway transport is concerned, the progress was absolutely nil.

3.2 Communication

a. Postal Services

Till FY 1960/61, the total number of post offices all over the country was 409. It was estimated that a post office at an average had provided service to 22,252 people within an area of 132 square miles. In FY 1974/75, the country had 1,006 post offices. Out of these, there were one general post office, 74 district post offices, 254 sub-post offices and 678 additional post offices. In FY 1989/90, Nepal had a total of 2,231 post offices. Thus in 1989/90 each post office provided service to 8100 people within an area of 66 sq.km.

b. Telecommunication Service

Regarding telecommunication sector, service of 1,120 telephone lines was available through the local telephone exchanges in FY 1960.1961, which meant one line served every 8,303 people. Population-telephone ratio in Nepal reached 250:1 with the availability of the service of 71,560 telephone lines in FY 1989/90. As regards international telecommunication, I.S.D. Service was made available to keep contact with several countries of the world.

c. Radio Broadcasting, Television Transmission and Periodicals

Radio Nepal has been able to reach 90 percent of the population through medium wave transmission by 1989/90. Similarly, many other dailies, weeklies and monthlies have been published from the private sector for the general publicity work. In reality, the people could rarely get true and real messages through the newspaper etc. in spite of the fact that freedom to newspapers etc. was planned with the motto of National Communication Plan with the motto of "Communication for development" was launched in 1971. The communication sector was in fact stagnated as the media of communication were within the government control. The Nepal Television has started operation its service since 1985.

4. Social Services

4.1. Education

The country made some progress in the field of education in the past. But that progress was merely limited to quantitative increase. While teacher-student ratio was 1:25 at the primary class (class 1-3) level in 1961, it increased to 1:39 by April 1990. Similarly, the school-student ratio of 1:46 in 1961, recorded a significant increase to 1:156 by April 1990. Hence, a situation arose, where sufficient number of schools could not be increased in comparison to the increase in the number of students. Out of the total students of the primary class of the age group 6 to 10, 182,533 had attended their classes in 1961 and this worked out to be 14.4 percent of that age group. Against this, 2,789,000 students attended classes by April 1990 and this worked out to be 80 percent of that age group.

While the number of lower secondary schools was 677 in 1972, this number reached 3964 by April 1990. Similarly, the school-student ratio decreased from 1:201 to 1:187 and the teacher-student ratio reached 1:28 from 1:26 following the increase in the number of students from 136,010 to 344,138.

Similarly, at the secondary school level, the number of schools increased from 156 in 1961 to 1959 in April 1990, the number of teachers from 1,772 to 10,421 and the number of students from 26,845 to 264,525. Hence, the school-student ratio of 1961 increased from 1:172 to 1:187 by April 1990 and similarly, the teacher-student ratio changed from 1:15 to 1:35. In the field of higher education, while the number of students in 1961 was 5,143, this increased to 102,130 in FY 1989/90.

Development requirements of the country could not be met in spite of this quantitative increase in the educational sector. The National Education plan (1971-75) was announced on April 16, 1971 claiming that the education system prior to the advent of the panchayat system was not in keeping with the country, time and the Nepalese society. It was believed that the system would be instrumental to fulfil the national objective of education towards preparation of necessary manpower for economic development with the dissemination of requisite knowledge, science, development, conservation and promotion of technical expertise and skill. In the process of implementing this system, the budget was increased 5 to 6 times in the districts where the education plan had been introduced; the schools run with the public participation were brought under the government employees on the name of making the teaching profession attractive, a ten-month mandatory field work under the national Development service programme was introduced; sixteen institutes and campuses were established by bringing about fundamental changes in the administrative set up of teaching institutions providing higher education.

The country could not make qualitative advance in the field of education as a result of the new education system; instead, there was further deterioration. No academic changes evolved in the attitudinal perspective

of the students and teachers, unsustainable financial burden increased on the educational sector and public participation was almost obliterated. Useful programmes such as the National Development service programmes were put off for political reasons. The situation of educational environment began to deteriorate further and education was taken as a medium to gain knowledge and skill. The National Education was proved to be ineffective and inappropriate on account of all these reasons.

4.2 Health

To look into the development of health services, while there were 39 hospitals, 1019 hospital beds, 55 health posts, 93 health centres and 63 ayurvedic dispensaries in the field of curative services in Nepal in 1961, the number of hospitals, hospital beds, health posts and health centres increased to 111, 4570, 816 and 18 respectively in 1990. While population per hospital bed was 9,146 in 1961, this was 3915 in 1990. Thus, each doctor had to provide service to 14,958 people in 1990. While the average life span of a Nepali citizen was 28 years in 1961, this increased to 53 by FY 1989/90.

Family planning programme was launched as a national programme only from FY 1965/66 through the government and non-government associations and institutions while maternity child health programme was initiated around FY 1973/74 only. Afterwards, family planning and maternity child health projects were implemented in all the 75 districts of the kingdom.

4.3 Drinking water

Attention was given towards providing drinking water facility right from the beginning of planned development. Drinking water programmes had been initiated especially in urban areas and some rural areas prior to 1960. By 1961 1,452,000 gallons of water per day was available to 6 percent of the population. In 1989/90, only 36 percent of the total population had drinking water facility with 67 percent and 33 percent of the urban and rural areas respectively having access to this facility. Accordingly, the available statistics shows that 5,424,000 and 1,134,000 residents of the rural and urban areas respectively had access to the drinking water facility.

Thus, majority of the people in the country are as yet deprived from an access to hygienic supply of water in spite of the fact that expansion of drinking water facility had taken place in the past. The water that was provided was also not available in required quantities. On the one hand, there was a lack of hygienic supply of water, and on the other, there was plenty of leakage in the drinking water. In addition to this, it is estimated that 70 percent of the diseases are caused by the polluted water.

Conclusions:

Viewed in the total perspective, in spite of massive investments made in the past, Nepal still remains one of the poorest nations of the world. Although some progress was made in social and physical infrastructural sectors, the progress appeared remarkable only in comparison to the negligible figures of the base year. In the absence of any political opposition, there did exist the opportunity of channeling the autocratic character of panchayat to rapid economic development but, unfortunately, this also did not materialise. The lack of structural change in production hindered the development process from gaining momentum. A low savings rate, the increased share of loan in foreign assistance, low level of industrialization, weak agricultural production, limited export trade and a high population growth rate remained as barriers in the path of development. The economy had to face serious problems due to imbalance between resource mobilisation and expenditure, imbalance between savings and investments and between export and import and the lack of control over population growth.

During the three decades of the panchayat regime, there was never a dearth of attractive fundamental reform programmes and slogans. However, these programmes were confined to mere slogans due to the lack of political commitment. Some of the functions whose initiation was attempted at conceptual and operational levels by the elected demarcation government in 1959 for fundamental changes in economic structure were given political colour and introduced as fundamental economic reform movements. Notwithstanding the fact that without people's faith and commitment no planned development can manifest into meaningful reality and nor can any sustainable change oriented to people's welfare be brought about in the economic structure, a revolutionary economic programme of land reform was introduced in the very beginning of the panchayat regime. Land reform was, in fact, an essential programme in a feudalistic rural society, but the inability to prepare accurate land records, lack of the guarantee of tenancy right, the existence of dual or multi ownership of land, inability to provide land for shelter and subsistence income, failure to keep records and make proper utilization of the collected savings, lack of diversification in crop farming and cottage industries in the rural sector and, above all, the

lack of desirable growth in production and productivity during the thirty years if the panchayat regime have clearly evidenced the failure of land reform. Instead, as a long-term consequence, there emerged a situation after land reform where Nepal, a major food exporter of south Asia, turned into an importer of food grains and the situation accelerated the process of migration, too.

A national campaign entitled 'Back to the Village' was initiated with a view to providing a village-oriented philosophical base to the panchayat regime. It was indeed a prerequisite for rural development. However, while it was predestined that there would be no going 'back to the village' without the decentralization of power, the construction of infrastructure for rural development and the creation of employment opportunities, this genuine movement instead of being utilized in development programmes was developed into a system of political evaluation of panchayat workers and a means of orienting them towards position of power. This movement experienced a misfortune when it turned into a process of the selection of workers, replacing the election system, masquerading as unanimity. The people were despaired of their aspirations, enthusiasm and zeal to participate in development efforts by this process, which thus created a set-back to local development.

It was, indeed, not at all inappropriate on a conceptual level to create a basis for balanced regional development through the formation of development regions based on a realistic delineation of a north-south growth axis or development corridors. However, no efforts were made towards developing a systematic settlement of the population along the growth or development corridors in desirable proportions and there were not launched, as required, any socio-economic programmes based on available local means and resources and focusing on the generation of employment opportunities either. Consequently, a system developed in which the center controlled the mechanism of regional development, which accorded a decisive role to the central Development Region creating an influx of a large population to it and making it the operation-site for the greatest number of development programmes.

The construction of the East-west highway which was initiated in the panchayat regime was a multidimensional project for national development. However, the construction of this highway designed to link the remote, inaccessible Far western Region could not be completed even within the stretch of thirty years. Nevertheless, it cannot be denied that whatever sectors were completed, did contribute to linking the socio-economic activities of the road corridors to the market-oriented economy. Moreover, since the immediate as well as long-term effects of a project of such a great magnitude were not taken into full consideration, the Terai region has now had to bear the brunt of the natural as well as man-made disasters like drought and floods due to excessive migration, haphazard human settlements and the degradation of the Churiya region and the Charkoshe Jhari (the forest belt of the Terai), once acclaimed as the treasure house of forest resources. The rehabilitation of the environment in terms of the magnitude of degradation that has occurred has become a momentous task for a century.

Enlisting panchayat as a third sector in the periodic plans of the panchayat regime, statistical projections were made with regard to people's labour contribution. People's participation undoubtedly deserved a significant role in the decision making process but the periodic plan and the ever decreasing percentage of people's labour contribution in the panchayat sector clearly demonstrated the fact that the so called people's labour contribution was a mandatory obligation imposed on people for the programmes decided upon for them by others. Thus, the essential and effective prerequisites for national development, people's participation and people's labour contribution, could not be utilized for sustainable development orientated to people's welfare.

During the panchayat regime, programmes were implemented with greater emphasis on the task of preserving the system than on national development. A new education plan was introduced in the form of a national education system, which in reality created a havoc in the education sector. There was an excessive increase in educated unemployment with no prospects of immediate work engagement, while, at the same time the shortage of manpower required for development work persisted. Education experienced a qualitative deterioration, the government had to bear the brunt of almost an unsustainable burden of expenditure, and the public participation in education recorded a steady decline.

Many commissions were constituted and studies conducted on the issue of the decentralization of power. The fact that efficient, autonomous local bodies are the corner-stone of a democratic system and can uphold the responsibility of local development through people's participation was ignored. With a view to projecting Panchayat as a democratization system, some efforts were made with regard to decentralization but there occurred centralization with several instances of retrieval of the decentralized authority. In the first place, the power entrusted to local bodies were not of permanent nature as the bodies themselves were liable to be dismissed at any time at the discretion of the government. While for the lack of decentralization in real terms, many projects aimed at integrated rural development with international

assistance could not deliver meaningful results, many projects, as the studies have revealed, created a negative outlook towards development at the local level.

A programme to control the increasing population was indeed indispensable. A population policy was formulated for this purpose. It included some basic activities such as the reduction of birth rate, control of immigration, control of migration from hills to the Terai and from villages to urban areas and maternal child health care. However, while the immigration problem remained unchanged due to the inability to restore cordial relations with the neighbouring country with an open border and the failure to recognize the problem in an international perspective, the other aspects of population control ended in failure for the lack of complementary programmes. In consequence, there arose impediments to urban development, the social service infrastructures became insufficient, unemployment increased, the environment deteriorated, pollution prevailed and in the long run, the adverse impact in the economy as a whole was evidently perceptible to all. Although in the three periodic plans of the panchayat regime preference was accorded to agricultural sector for intensification and diversification in crops through reforms in the farming system of this country composed of hamlets and villages, the wide gulf between planning and implementation always led to a negative result. While it called for liberal economic policies and the creation of an atmosphere conducive to industrialists with some reassurances in certain spheres for achieving industrial expansion, the industries could not prosper in the absence of transparency in industrial policy which remained under strict government control. Even those industries which had begun their operation could not flourish for not being able to acquire self reliance.

The 'basic needs' programme announced in Dec./Jan/ 1985 became the principal slogan and priority of the Seventh plan. This programme took a vow to fulfil the basic minimum needs such as foodgrains, clothing, housing, health, education and public security among others and raise the economic condition of the people to the Asian standard by 2000. Because of the dynamic nature of the Asian standard, the term was eventually deleted from the slogan. The basic needs programme had adopted a supply oriented approach in its formulation paying no attention to the purchasing power of the proposed consumers. Without any resource mobilisation for physical and institutional development, production targets, unthinkable in a historical perspective, were set for the fulfillment of the needs.

In consequence of the distorted ad hoc economic policies of thirty years interspersed with hollow slogans of disappointing development resumts and programmes without achievements, the country had to bear several economic distortions which were as follows.

Excessive Control and Regulation:

The control-oriented development approach of the past created many problems. Increased government control, adhoc regulations and procedures, license requirements and other forms of counterproductive bureaucratic behaviour tended to discourage decision making process and delays in the disbursement of budgets increased project implementation costs and resulted in the under utilization of the administrative capacity.

Inefficient Public Enterprises:

The performance of state owned enterprises reached a stage of great inefficiency, indifference and apathy. The financial liabilities of these enterprises exceeded the capacity if the government. These enterprises suffered as a result of over staffing, political intervention, inefficiency and the lack of accountability.

Inefficient Investment Portfolio:

Cost-benefit ratios, and other criteria criteria which measure the economic and social benefits of projects were neglected in the coruse of selecting projects to be implemented in various sectors and sub-sectors. The interrelationships among projects and alternative investment options were not takes into consideration. As a result, investment could not be channeled to productive sectors. Many projects were not justifiable from economic and social points of vies.

High cost Economy:

In view of the inaccessibility and the ruggedness of terrain it is not unusual for the production and delivery costs to be high.

But in addition to these realities, the cost component of the economy has been further aggravated by the dominance of donor driven projects, economically unproductive investments, lack of discipline, limited economic resources of projects, unwarranted expansion of bureaucracy and lack of efficient implementation capabilities.

Inefficient Administration:

Inefficiency in the administration has led to a further deterioration in the government's institutional abilities to effectively implement development programmes. The civil service has expanded continuously, has been under utilized, and lacks motivation. Traditional administrative and economic structures, highly centralized authority and the lack of sufficient power at the local levels are some of the reasons.

Faulty Planning Process:

The planning process remained very weak and was poorly institutionalized. While projects were chosen on an ad hoc basis without due consideration to any social or economic criteria, government investments in projects were not based on any long term sustainability considerations. In consequence, there was always a scarcity of resources at the implementation phase. Political decisions were often autocratic and feudalistic. As a result, the planning process lacked accountability and was unable to induce genuine popular participation. While the weak programmes became centrally directed, in addition to being donor driven.

Policy changes and Achievements During 1990-1992

The main responsibility of the interim government formed after the restoration of the multi-party system through the historic people's movement of 1990 against the panchayat regime was to concentrate on two things:

1. To formulate constitution compatible with the norms and values of Multi-party democratic system.
2. To hold general elections in accordance with the constitution. As it was incumbent upon the interim government to fulfil these two functions within a short period on a priority basis, the task of formulating a periodic plan was postponed for the time being. Subsequent to the formation of the interim government, an understanding with India in May 1990 ended the trade impasse with India which had begun on March 23, 1989, reinstating the status quo ante in relationship with India. This understanding with India had a positive impact the year on the country's economic activities. The government established a citizen's investment fund, introduced wealth tax and made efforts to reduce the budgetary deficit. Similarly, policies were adopted to increase the role of the private sector in agriculture and to offer additional incentives to low-income farming families in the course of providing loans.

Following the formation of the Nepali congress government with a clean mandate in the general elections held in May 1991, the National Planning Commission in the course of formulation the Eighth plan brought out for circulation and approach paper of the plan. The government formed through general elections started taking some major steps to remove the distortions in the country's economic and administrative structure. Initially, the present government took steps to transform the controlled economy of the past thirty years into an open, liberal, transparent and competitive market oriented economy. The approach to the eighth plan was prepared accordingly. In order to expand the participation of private sector in economic activities, new monetary, fiscal, industrial and commercial sectors were introduced. Similarly, with the objective of achieving full convertibility of the Nepalese currency in current account, a partial convertibility system was introduced.

A policy was adopted to abolish licensing for the establishment of industries except for those related to defence, public health and environment and to operate a one window system for providing facilities to the industries. In view of huge losses being incurred by public enterprises, a process was initiated to privatize three government owned industrial enterprises. Necessary procedures have also been initiated to privatize five agricultural farms in government sector. With a view to strengthening the internal air service, permission was granted to private sector to operate domestic flights. As a result, three private sector airlines have begun their domestic flight operation within one year. Liberal policies aimed at attracting more tourists have also been adopted to encourage the services of foreign airlines.

With the objectives of attracting foreign investors, a new foreign investment policy was formulated. To promote export, arrangements have been made for free export of all commodities without licence requirements except for a few sensitive items. Similarly, a policy was introduced to gradually phase out the quantitative restrictions on imports and adjust them through customs tariff.

Changes were made in financial rules to minimize control and intervention and expedite plan implementation. According to these new rules, project chiefs are authorized to sanction estimated expenditures of up to 5 million rupees, to approve tenders of up to 20 million rupees and to modify up to 10 percent of total expenditure on technical grounds. Programmes were also initiated to privatize inefficient public enterprises for promoting their efficiency in keeping with efficient commercial principles, to reduce unproductive investment and to list 316 ongoing projects for implementation at the National Planning Commission level. The listing of these projects would be done upon reviewing them for justification of their implementation from an economic point of view and from their compatibility with the environment and to make the planning process more efficient and effective. Direct involvement in keeping with the policy of decentralization. Accordingly, the District Development Committee Act 1992, the Municipality Act 1992 and the Village Development Committee Act, 1992 have been formulated and implemented. At the same time, the election of local bodies was also completed. The local election has thus successfully laid down the foundation for a democratic system and the local bodies have now initiated the tradition of playing an important role in development activities in consonance with the policy of decentralization.

Furthermore, the foreign exchange reform was another significant step undertaken during this period. Partial convertibility in foreign exchange was introduced in February 1992. Under this arrangement, the banks conducting business in foreign currency were allowed to sell 65 percent of their earnings from trade

or services at the open market exchange rate by making available 35 percent of the foreign currency earning to Nepal Rastra Bank at a rate fixed by the bank.

During the same period, the agreement reached with India on trade, transit and the control of unauthorized trade removed the feeling of instability prevalent in the trade sector. The new agreement incorporates significant provisions such as mutual understanding to be reached on the issue of the exemption of Indian tax on the export of primary goods from Nepal, the reduction of the mandatory constituent percentage of indigenous raw materials from 80 percent to 65 percent in the manufactured products of Nepal, the reduction of internal value added from 50 percent to 40 percent and so on.

With the objective of providing direct benefits to the low income people, a policy was adopted granting one third interest subside on the current interest rates in a loan of upto Rs. 10,000 under the small farmers Development project, Intensive Banking programme, and Rural women Development programme. Similarly, another policy allowed a 80 percent interest waiver at prevalent rates of interest to the economically deprived sections in the rural area for income generating employment activities on a loan of upto Rs. 2,500 procured for the spinning wheel and wool for carpet industry, handichafths, small-scale mills, small farming enterprises etc. As a part of the alternative energy development programme, rural electrification was initiated. A provision to offer a capital of Rs. 7,000 was made to make the bio-gas plants accessible to rural families. These steps will make important contribution in alleviating poverty in rural areas.

In order to effectively and appropriately implement the above mentioned policies, it is necessary to increase the work-efficiency of the government administrative machinery and to achieve the active participation of the private sector. The government has accordingly constituted a high level Administration Reform commission and a process has been initiated for the implementation of the commission's recommendations'. Similarly, a commission was formed to undertake a detailed study of the civil servants' pay scales and make necessary recommendations in order to raise the moral of the civil servants and increase their work-performance. The government also raised the salary in accordance with the recommendations of the commission.

Economic Situation:

1. Gross Domestic Product:

A revised estimate indicates that the per capita income in 1990/91 reached Rs. 1736 (at 1974/75 constant prices). Similarly, according to a preliminary estimate, the per capita GDP is expected to increase only by 1 percent in 1991/92. Therefore, the per capita income has increased marginally and estimated to have reached Rs 1754. only a marginal increase in per capita income in 1991/92 can be mainly attributed to the decline in agriculture production. In the period of 1989/90-1991/92, the gross domestic product went up by 4.3 percent with the growth of 1.6 percent in agricultural sector and 8.4 percent in non-agricultural sector. As long as the economy is dominated by factors like weather, the agricultural production will certainly not be able to achieve the desired growth.

In the fiscal year F.Y. 1990/91 (at F.Y. 1974.75 constant prices), the shares of an agricultural and non-agricultural sectors in gross domestic product were respectively 59.4 percent and 42.1 percent, which are expected to be 57.9 percent and 42.1 percent respectively in F.Y. 1991/92. Thus, over the past few years, while the share of the agricultural sector has shown a gradual decline, the non-agricultural sector's share has recorded a steady growth. The main contributing factors for this can be attributed to the various efforts of the government for the development of the non-agricultural sectors.

During the F.Y. 1989/90-1991/92 period, the major crops recorded an increase of 0.1 percent with a decline of 0.7 percent in the production indices of major food crops and a 3.6 percent increase in cash crops. In that period, while the production of most of the crops increased, paddy, oil seeds and tobacco recorded a slight decrease.

The production indices of major industrial products are estimated to have gone up by 22.2 percent in 1989/90-1991/92 period. According to the new classification of industrial products, it is estimated that the production of food products, beverages, textile, tobacco products, shoes, plastic goods, the products of iron and steel based industries have increased during the period under review. Further acceleration in industrial production is expected as a result of the new industrial policy.

2. Investment and savings:

In fiscal year 1990/91, gross investment is estimated to have increased at a rate of approximately 28.4 percent to Rs. 21,163 million, which stands at 20.1 percent of gross domestic product. Similarly, the gross

domestic savings is estimated to have reached Rs. 6864 million with an increase of 23.4 percent in 1990/91. this is merely 6.5 percent of gross domestic product.

It is estimated that the total consumption in fiscal year 1990/91 increased by 15.4 percent amounting to Rs. 94,836 millions. Thus, investment-savings ratio declined from 33.7 percent in 1989/90 to 32.4 percent in that fiscal year.

3. Government Financial Situation:

3.1 Development Expenditure:

The total development expenditure stood at Rs. 15,979.5 million at current prices in the fiscal year 1990/91. in 1991/92, the development expenditure is expected to decrease, according to the revised estimate, by 6.5 percent to reach Rs. 14945.7 million. At constant prices, the total development expenditure in fiscal years 1990/91 and 1991/92 is estimated to be Rs. 2997.5 and Rs. 2320.8 million respectively. For 1991/92 the development expenditure appears to be comparatively low, as the C.B. Pass amount also has been included in the development expenditure of 1990/91.

3.2 Sources of Financing Development Expenditure:

a. Revenue Surplus:

It is estimated that total revenue will increase by 19.7 percent at current prices and 3.9 percent at constant prices in 1989/90-1991/92 period. According to revised estimates, while the government revenue will go up by 17.2 percent at current prices and 1.7 percent at constant prices, the non-tax revenue is expected to increase by 28.4 percent at current prices and 11.5 percent at constant prices. If the revenue grows at this rate, the total revenue will reach 10.2 percent at current prices and 6.2 percent at constant prices of the gross domestic product. Similarly, it is estimated that the tax-revenue will be 7.7 percent at constant prices, and the non-tax revenue will be 2.5 and 1.6 percent of GDP respectively. The indirect taxes are thus estimated to continue their predominance in the tax revenue structure.

During this period, regular expenditure will, according to the estimate, grow by 20.1 percent at current prices and 4.3 percent at constant prices. Viewed in terms of the share in gross domestic product, the regular expenditure in 1990/91 and 1991/92 stands respectively at 7.2 and 7.4 percent at current prices and 4.4 and 4.5 percent at constant prices. Patiently shouldering the newly elected government made all possible efforts to control the regular expenditure.

Despite the continued efforts to increase revenue and control regular expenditure, there was no marked increase in the revenue surplus because of a low collection of taxes particularly in 1990/91 and the pressure of the increased salary of civil servants on regular expenditure especially in the latter months of 1991/92. The share of revenue surplus on gross domestic product remained at current prices at 3.0 percent in 1990/91 and 2.8 percent in 1991/92. At constant prices the figures thus stood at 1.8 percent and 1.7 percent respectively.

b. Deficit Finance:

During the period under review, as the targeted growth in revenue was not achieved, concerted efforts were made towards controlling the mobilisation of deficit finance in the economy and remarkable progress was made in this regard. The share of deficit finance is expected, especially in 1990/91, to be 1.0 percent at current prices and 0.6 percent of GDP at constant prices, and thus the share of the same in internal resource mobilisation is estimated to be only 22.1 percent.

c. Foreign Assistance:

As a result of the steps taken by the government towards eliminating the level of disparity between foreign aid commitments and their utilization, the committed foreign aid during 1990/91 is expected to have been fully utilized nearly to the extent of hundred percent. The utilized amount appears to have exceeded the aid commitments because of the inclusion of unused amount of previous years. In view of the heavy reliance on foreign assistance in the past, it was not possible to drastically reduce this dependence. Furthermore, as various projects at different stages of implementation are being funded by foreign aid and as their closure would not only entail a wastage of foreign aid in development expenditure and the share of loan in total foreign aid are estimated to be more or less equivalent to those in 1989/90.

4. Monetary and credit situation:

the principal objective of the monetary policy of the period under review was to regulate the rate of money supply at a level sustainable at the actual growth rate of national production and the national economy, to strengthen the financial base by introducing reforms in the financial sector, to make the bank interest rates

more realistic by enhancing the efficacy of indirect monetary control measures and the economically deprived people and in the priority sectors.

The money supply level increased at the rate of 17.6 percent from mid July 1989 to mid July 1991, as a result of which the money supply level which stood at Rs. 11,775.4 million in mid July 1989 reached Rs. 16,283.6 million in mid July 1991. During that period, the currency increased by 21.2 percent and the current deposit by 9.9 percent. This high growth rate of money supply was caused by both internal and external factors. The net foreign assets increased from Rs. 6203.5 million in mid July 1989 to Rs. 16,150.7 million in mid July 1991. The domestic credit went up by 130.9 percent during that period.

The commercial banks, it is noticed, directed their loans and investment towards the government sector during this period. Out of the total loan and investment disbursement of Rs. 18,917 million from commercial banks in mid July 1990, loan totaling Rs. 3582.5 Million was disbursed to the government sector. Similarly, by mid July 1991, the government sector had received Rs. 7,373.1 million out of the total bank credit and investment disbursement of Rs. 24,410.5 millions. However, the public sector undertakings appeared to have received less bank credit disbursement in mid July 1991. On the other hand, loans to the private sector gradually increased. The level of credit extension to the private sector, which stood at Rs. 12,733 million in 1990, reached Rs. 15026.8 million in 1991.

5. Price situation:

During the period 1989/90 and 1991/92, the urban consumer price index went up by 15.2 percent experiencing a growth rate of 16.8 percent in food and beverage products and 12.1 percent in non-food products and services. The major reason behind the 15.2 percent and service. The major reason behind the 15.2 percent growth was the increase in overall index by 20.8 percent in 1991/92. The immense growth in non-food products and services accompanied by the increase in food and beverage products in 1991/92 caused the price level to reach extremely high during this period. However, both internal and external factors were responsible for this high price rise. At the internal front, the major factors were the reduction in the production of food crops because of adverse weather conditions, the devaluation of the Nepalese currency in comparison to convertible foreign currencies leading to the increase in prices of raw materials and foreign goods imported from third countries, the immense price rise in Indian imports owing to the decline in the production of food and other products as a consequence of adverse weather conditions and the excessive liquidity in the economy. Similarly, the external factors consisted of the increase in the rates of foreign exchange and the inflation in Indian market etc.

6. Foreign Trade and Balance of Payments Situation:

6.1 Foreign Trade:

As a result of the trade impasse with India, the share of the trade with India in total foreign trade was only 22.7 percent in 1989/90, which increased to 28.5 percent in 1991/92 following the improvement in Nepal-India relations subsequent to the people's movement of 1990.

The export, which stood at Rs. 7,503.7 million in 1990/91, increased to Rs. 13,939.4 million in 1991/92. Out of the total export, the export to India was Rs. 1,701.2 million in 1990/91 and reached to Rs. 1,568.9 million in 1991/92.

On the import front, the fiscal year 1990/91 recorded the total import of Rs. 24,197.9 million, which reached Rs. 32,951.3 million in fiscal year 1991/92. The import from India which stood at Rs. 7,772.4 million in 1990/91 increased to Rs. 11,815.9 million in 1991/92. Similarly, imports from other countries increased to Rs. 21,135.4 million in 1991/92 from Rs. 16,425.5 millions in 1990/91.

Thus, the total trade deficit, which was Rs. 16,594.2 million in 1990/91, increased to Rs. 19,011.9 million in 1991/92. In 1990/91, while the trade deficit with India was Rs. 6,071.2 million, with other countries it stood at Rs. 10,523 million. Similarly, the deficit with India and other countries in 1991/92 stood at Rs. 10,247 million and Rs. 8,764.9 million respectively. Thus, the trade deficit which increased by 26.0 percent in 1990/92 declined to 14.6 percent in 1991/92.

In view of the trade composition of the country, the industrial goods have, in comparison with food products and raw materials, started gaining dominant share in the country's export. The share of food products and raw materials in the total export was 21.9 percent in fiscal year 1990/91 and 19.4 percent in fiscal year 1991/92. Similarly, the share of industrial goods in total export stood at 78.1 percent in fiscal year 1990/91, it increased to 80.6 in fiscal year 1991/92.

The increased predominance of the industrial goods in the import trade composition in fiscal year 1990/91 continued to the subsequent year of 1991/92, too. The share of food products and raw materials in total import was 30.9 percent in F.Y. 1990/91, which increased slightly to 3.6 percent in F.Y. 1991/92. Thus,

the share of industrial goods slightly declined from 69.1 percent in F.Y. 1990/91 to 63.4 percent on F.Y. 1991/92.

6.2 Balance of payments situation:

Although the balance of payments situation appeared favourable during F.Y. 1990/91, the current account deficit was noticed to have increased considerably. While the current account had increased to Rs. 10,254.9 million in F.Y. 1990/91, it reduced to Rs. 9,578.1 in F.Y. 1991/92. The principal reason behind the fall in current account deficit was the slackness experienced in the increase of trade deficit. During these years also, foreign grants and loans played a major role in maintaining a favourable balance of payments situation.

The burden of trade deficit and external loans has been steadily increasing on the total amount in the economy. Yet, compared to historical growth rate (1974/75-1989/90), it is on the decline. For instance, while the trade deficit increased by 19.4 percent as current account by 32.0 percent in 1974/75-1989/90, they recorded average annual growth rates of 14.5 percent and 11.5 percent respectively during the period 1989/90-1991/92. As compared to the trade deficit of Rs. 16,907.6 million in 1990/91, it has reached Rs. 17,302.5 million in the first eleven months of 1991/92. Although, there occurred a slight growth in service income (net) and transfer income (net), the rate growth was unable to meet the increase in trade deficit ad, consequently, the current account deficit has increased during these years. While in 1990/91 the balance of payment surplus was Rs. 4,781.2 million, the surplus reached Rs. 4,306.6 million in the first eleven months of 1991/92. Thus, as a result of the increased flow of external loans and capital and capital and miscellaneous capital (net), there has been an increase in the balance of payments surplus this year also in spite of the considerable increase in trade deficit and current account deficit.

7. Foreign Exchange situation:

The policy of partial convertibility in foreign exchange was adopted since 4th march 1992. Following its introduction, the commercial banks have begun foreign exchange transactions at open market exchange rate for payments to these sectors.

The foreign exchange reserve which stood at an amount equivalent to Rs. 11,984.6 million in mid July, 1990, increased to Rs. 19,270 million in mid July, 1991. thus, while the foreign exchange reserve in mid July, 1990, was just sufficient to cover 7.6 months of imports, the reserve grew sufficiently to cover 9.9 months of imports by mid July 1991.

Physical progress situation:

1. Agriculture, Forest and Irrigation

1.1 Agriculture:

During the period from F.Y. 1989/90 to F.Y. 1991/92, the major food crops recorded a decline of 2.2 percent in production and 0.7 percent in cultivation area. During the same period the productivity of food crops declined by 1.5 percent.

Major cash crops increased during the same period by 9.9 percent in production and 1.5 percent in area. The rate of productivity went up by 7.9 percent.

As regards the sale and distribution of production inputs in F.Y. 1990/91, 72,719 metric tons of chemical fertilizers and 2,325 metric tons of seeds were sold. At the same time, agricultural credit disbursed during that period amounted to Rs. 1095.3 million. It is estimated that 86,000 m. tons of chemical fertilizers and 2210 m. tons of improved seeds were sold in F.Y. 1991.92. similarly, agricultural credit to the tune of Rs. 1,220.2 million is expected to have been made available.

1.2 Forest:

in forestry development, while tree plantation was carried out in 8,956 hectares in F.Y. 1990/91, it was, carried out in 11,794 hectares in F.Y. 1991/92. in the soil conservation and watershed management sector, 29 gully control, 24 landslide control, terrace-rehabilitation work in 92 hectares and protection of 43 water sources were accomplished and 283 tons pf medicinal herbs were processed. Similarly, in 1991.92 it was expected to accomplish tree plantation for soil conservation in 740 hectares, control of 34 gulleys, 83 numbers of landslide control activities, terrace rehabilitation in 239 hectares and protection of 61 water sources. During the same period, 204 m. tons of medicinal herbs also is expected to have been processed.

1.3 Irrigation:

While the irrigation facility was available to additional 20,810 hectares only in 1990/91, it is estimated to have been extended to an additional area of 27,527 hectares. Thus the total irrigated land is estimated to have reached 598,804 hectares, which forms 22.84 percent of the total cultivable land.

2. Industry, Tourism and Electricity:

2.1 Industry:

The industrial production index increased by 29 percent (1986/87=100) in the fiscal year 1990/91. The main reason behind the higher growth in industrial production that year can be attributed to the convenient supply of industrial raw materials following the end of the trade and transit impasse between Nepal and India in May 1990. In that fiscal year the capacity utilization in sugar, cement, brick and tiles and jute sectors recorded an increase. The industrial production is estimated to have risen by 15.7 percent in F.Y. 1991/92. It is estimated that in this year there has been an increase in the production of animal feed, cotton cloth, jute goods, powder soap, cement, beer, battery, plastic and jute items. During these years, the share of small and cottage industries in gross domestic product remained around 1 percent. While there was an investment of about Rs. 1,723.4 million in cottage and small industries registered within the first nine months of F.Y. 1990/91, it was estimated that in F.Y. 1991/92 there would be an investment of about Rs. 1,801.4 millions on 4708 industries registering within the first nine months.

2.2 Tourism:

New trekking routes were opened in Mustang and Manang regions in the two 1990/91 and 1991/92 fiscal years. Permission was granted within this period to three private companies to operate air services and to one to operate helicopter service. In respect of the extension of airport facilities, the installation of terminal tower equipment was completed in Tribhuvan International Airport and at Nepalgunj, Dhangarhi, Surkhet, Simra and Rumjatar air fields. The number of foreign tourist arrival which stood at 279,747 in F.Y. 1990/91 increased by 7.8 percent to 301,496 in F.Y. 1991/92. While the foreign currency earning in 1990/91 was equivalent to US dollar 56.9 millions, it reached US dollar 62.1 million, going up by 9 percent in 1991/92.

2.3. Electricity:

By the end of 1990/91, a total of 231.873 megawatts of hydropower was generated, which is 0.279 percent of the nation's hydro power potential. The total hydropower generation by 1991/92, reached 238.313 megawatts, which is 0.287 percent of the total potential.

3. Transport and Communication:

3.1 Transport:

a. Roads:

Until the end of fiscal year 1990/91, 1 km. of road served 2194 people with 3083 km. blacktopped, 2281 km. graveled and 3064 kms. Fair weather road totaling 8328 km. Additional 581 km. of roads were constructed in F.Y. 1991/92. Out of this, 107 kms. are blacktopped, 103 kms. Graveled and 371 kms. Fair weather roads.

b. Air Transport:

By 1990/91 and 1991/92 there were, including Tribhuvan International Airport, 43 air fields in the country of different capacities, serving 1 Jet plane, 8 Avro air planes, 30 Twin otters and 4 Pilatus Porter. Air service was operated to 36 destinations in the domestic sector and to ten major cities in foreign countries in 1990/91 and the same situation was maintained in the fiscal year 1991/92, too.

3.2 Communication:

a. Postal services:

By the fiscal year 1990/91, there were all together 2231 post offices consisting of 1 General post office, 74 District Post offices, 477 Area post offices and 1676 Additional Post offices. The figure increased to 2271 post offices by the end of F.Y. 1991/92. Thus, by the end of F.Y. 1991/92, one post office served 8146 people in an area of 65 sq. kms.

b. Telecommunication Service:

A total of 57,320 telephone lines were distributed in 38 urban areas by mid January 1991, with one line serving 3200 people. The telephone line and population ration stood at 1:290 by January 1991 with the distribution of 65,298 telephone lines in 38 urban areas. While STD and ISD facilities were available at 62 places on 50 districts until January 1991, these services were made available at 69 places in 55 districts

by January 1992. Similarly, the number of countries with ISD telephone connection increased from 38 in January 1991 to 50 in January 1992.

4. Social services:

4.1 Education:

In primary education, the student enrolment reached 2, 788, 644, the number of schools 17,842 and the number of teachers 71,213 by mid April, 1990, which established the school-student ration at 1:156 and the teacher-students, schools and teachers increased respectively to 2,926,000; 18,681 and 74,849 giving rise to 1:157 school-student ration and still 1:39 teacher-student ratio.

In lower-secondary education, the student enrolment figure being 344,138, the number of schools 3,964 and the number of teachers 74,849, the school-student ratio remained at 1:87 and teacher-student ration at 1:28 by mid April 1990. The school-student ration and the teacher-student ration reached 1:98 and 1:29, as the numbers of enrolled students, school and teacher increased to 381,000, 4,092 and 13,207 respectively by mid April 1991.

In secondary education, the figure of student enrolment, stood at 364,525, the number of schools at 1,953 and the number of teachers at 12,399 in 1990, which resulted in 1:187 school-student ration and 1:35 teacher-student ration. By 1991, the student-enrolment reached 386,000, the number of schools 2081 and the number of teachers 11,383, giving rise to a school-student ration of 1:185 and a teacher-student ration of 1:34. As part of the process to provide secondary education free of cost, tuition fees for grade VI were waived from 1991.

In higher technical education, the student enrolment was expected to have been 15,686 in 1990/91 and 17,919 in 1991/92. In the field of higher general education, the enrolment figure was estimated to have stood at 78,061 in 1990/91 and 91,567 in 1991/9. At the same time, a university also was established in the private sector. Similarly, in order to reduce the student enrolment pressure on existing campuses and provide job-oriented education to students, a 12-class higher secondary education (10+2) programme was initiated.

4.2 Health:

By the fiscal year 1991/92, the number of hospitals reached 111, health posts 816, health centres 18 and Ayurved hospitals 155 and during the same period the number of doctors and women health volunteers (nurses) stood at 1,182 and 24,000 respectively. Thus, the doctor-patient ration and the hospital bed-population ration reached 1:15, 800 and 1:3,967 respectively. At present, the average life-expectancy of the Nepalese people is estimated to have reached 54 years. Infant mortality rate stands 102, child death rate at 165, the crude birth rate at 39.60 and crude death rate at 14 per thousand respectively.

4.3 Drinking Water:

It is estimated that by the end of F.Y. 1990/91, 5,878,000 people in the rural areas and 1,163,000 people in the urban areas, a total of 7,041,000 people had access to drinking water facilities. Out of this figure, it was in 1990/91 alone that the drinking water facility was provided to 482,899 people. It is estimated that within F.Y. 1991/92 the drinking water facility will have been provided to an additional number of 830,000 people, 30,000 in the urban areas and 800,000 in the rural areas. Thus, according to an estimate, by the end of F.Y. 1991/92, 6,699,000 people (39 percent) in the rural sector and 1,172,000 people in the urban areas (66 percent), a total of 7,871,000 people would have had access to drinking water facilities.

Challenges:

As a result of the controlled and protection-oriented policies of the past, the economy could not achieve desired level of development and economic distortions emerged. This led to anomalies in the allocation of resources. In the absence of a competitive atmosphere, attention was not paid towards increasing efficiency. Therefore, no satisfactory achievement could be made in the economic sector. This gave rise to increasing poverty problem. The impact of this situation was evidently felt in the last two years, as well.

During the past two years, there was instability in agricultural production. As a result of the continuing heavy dependence of gross domestic production on water conditions, the trends of annual fluctuations in economic growth rate persisted. In 1991/92, the meager growth of 0.1 percent in agricultural sector are believed to provide impetus to the growth rate of non-agricultural sector in the years to come. On the agricultural front, the development of market-oriented production pattern is necessary for the growth in integrated and coordinated manner to agricultural inputs, services, incentives and irrigation facilities.

At present, owing to the excessive liquidity in the economy, while the rate of consumption is increasing, the rate of savings is on the decline. Consequently, compared to gross domestic product, the size of

investment of late have been decreasing. The increase in government expenditure and the lack of sufficient development in alternative investment sectors capable of attracting private savings have led to increase in consumption and the fall in gross domestic product. Therefore, it is incumbent upon His Majesty's Government to adopt suitable policy measures to bring about an increase in savings, to discourage unproductive investment and expenditure, to provide alternative sources for the mobilisation of savings and to promote private sector investment in productive areas.

In view of the government financial situation of the last two years, the reliance on external loans has further accentuated instead of declining because of the need for adjusting the financial deficit caused by increasing government expenditure. Therefore, it is necessary to give special emphasis on the mobilisation of internal resources. For this purpose, necessary steps must be taken to check the revenue pilferage and explore new sources of government revenue, to broaden the tax bases and simplify the administrative procedures. It is also essential to curtail unproductive expenditures.

On the monetary front, there has been an excessive increase in money supply since the last year. Due to this excess liquidity in the economy, while there has been a great pressure on price situation, the ratio between gross domestic product and current account deficit has remained very high (9.7 percent). Under the present circumstances, the money-supply should be maintained within desirable limits without causing any undue scarcity of capital to intensify the pace of economic development. The increase in net foreign assets is also exerting expansionary influence on money supply. In this context, the foreign exchange should be utilized positively and productively in order to increase productivity and employment opportunities in the economy. Timely improvements on the interest rates are also required for reducing the excessive liquidity and inflation, and for promoting saving habits. Similarly, the policies of loan disbursement by commercial banks in productive, priority-accorded sectors need to be intensified so as to gradually alleviate poverty through the creation of new employment opportunities for the economic upliftment of the low income rural population.

In the price situation, the problems of high price rise has not only reduced the competitive capacity of the economy but also caused great sufferings to the people. This has created tremendous hardships particularly in the livelihood of the people living below the poverty line. Thus, it is necessary to provide relief to the people by cutting down the rate of increase in prices. To attain this purpose, it will be essential especially to curtail the unproductive government expenditure, to increase the work efficiency of public undertakings, to monitor the price situation on a regular basis, to emphasize on the attainment of equilibrium in foreign trade and to improve the supply and distribution systems of essential commodities. In this regard, various steps were taken to achieve a regular and convenient supply of the essential commodities for the common people such as foodgrains, salt, sugar and cement.

During the past two years also, the foreign trade deficit has increased and is the previous years. This has led to an increase in the current account deficit, too. There has not been much vigorous effort made in direction of expanding the export trade by exploring and identifying new viable products. The primary items like raw materials and a few manufactured goods still hold prominence in the country's export trade. Similarly, the trade deficit with India has increased on account of the increased import of manufactured items from India in comparison to the export of traditional agro-based and unprocessed products to that country. Therefore, in order to expand the export trade, due attention must be paid to the identification of new exportable products and the amelioration of quality standards of the export items. Thus, in the context of the necessity to expand trade relations with India to the benefit of Nepal, the new Nepal-India Trade and Transit Treaty has created many possible avenues for the growth of Nepal's export trade.

Despite the massive investment outlay for agricultural development in each periodic plan in the past, the agriculture sector could not achieve the desired progress. Agriculture is even today primarily dependent on weather condition. There has not been any marked increase in productivity. Therefore, in order to achieve some concrete growth in agricultural production and productivity, it is essential to make optimum utilization of the irrigation facilities through their suitable renovation, maintenance and operation, and to establish convenient and reliable systems for the distribution of improved seeds and chemical fertilizers, the dissemination of appropriate technology and the disbursement of agricultural loans. As the drains and small irrigation projects have a great significance in agriculture and also actively involve the farmers themselves, it is highly essential to undertake such irrigation projects on a priority basis.

A new industrial policy has been formulated to intensify the pace of industrial development. The new policy has brought an end to the doubts, uncertainties and distortions prevailing in the industrial sector. Following the introduction of the new policy in 1992, approval has been granted by mid June to a remarkable number of industries seeking registration. At the same time, while three industrial undertakings have already been privatized, the process of privatization will be further continued. As the

liberal and open policies professed by the new industrial policy for improvements on the economy as a whole will create a competitive industrial climate, maximum benefits must be derived from the changed climate by enhancing the industrial capabilities of the entrepreneurs involved in this sector. The government owned corporations must strengthen their management to enhance their work efficiency. The sick government undertakings will have to be gradually handed over to the private sector. Additional efforts are required to develop the necessary infrastructure for tourism, which has evolved as a main source of foreign currency earnings, and the involvement of private sector in these efforts should be encouraged.

The heavy reliance on forests for the total energy consumption of the country has led to a massive destruction of forests. This has had detrimental effects on environmental balance as well as agricultural production. In the absence of convenient and likelihood of reducing the reliance on traditional sources of energy like forests in the immediate future. Therefore, there is a great need to achieve a consistent balance between the demand and the supply of timber and firewood by according priority to forestry development and by soliciting active participation of the people themselves in afforestation activity.

In spite of the immense hydropower potential of the country, it has not been possible to significantly exploit this due to the lack of resources. The hydroelectricity and irrigation facilities need to be expanded through necessary arrangements of means and resources for the maximum utilization of hydro power. Viewed on the basis of cost factor, it seems appropriate to give more emphasis in the construction of small and medium scale hydro electric projects than on large scale projects. Greater involvement of private sector is required in the generation and distribution of hydro-electricity, too.

On the transport front, although some roads were constructed in the past years, there are still no link roads to some district headquarters. Further, as not much attention was paid to the proper alignment of the roads during construction, the roads have not been able to intensify the economic activities of the people living in the road corridors. Therefore, it is necessary to pay attention to the task of constructing link roads to district headquarters and other feeder roads on the basis of economic feasibility studies and also to the repairs and maintenance of old roads.

In the field of social services, the country has not been able to derive much benefit except for some progress in the field of education. The lack of qualitative development in education is the main reason for this situation. Therefore, while keeping education in agreement with moral norms and values, attention must be paid to developing the quality of education and making it job-oriented. Higher education faces scarcity of physical facilities for standard pedagogy and is heavily reliant on government grants. There still persists the problem of maintaining the academic calendar, which has an adverse effect on students' future. Therefore, it is imperative to develop a time bound educational framework and encourage the private sector involvement in higher education. Similarly, there has emerged an urgent need to upgrade the quality of primary and secondary education.

The country has not been able to derive potential benefits from the investment made in the health sector as well. The physical infrastructure in health sector is being gradually developed and a big investment has also been made in the production of health manpower. However, while there is a regular complaint from people concerning the unavailability and scarcity of medicines and manpower in hospitals and health centres, the burden of the increasing population is exerting a heavy pressure on social services, and this population growth has minimized the impact of development achievements. No significant education has been achieved in the growth rates of population and infant mortality. In this context, it has become essential to make maximum possible utilization of existing physical facilities, manpower and services and to extend additional facilities to rural areas.

Regarding drinking water, the majority of the country's population is deprived of the access to clean drinking water facilities. The supply of water, in areas where the facility exists, too, has not been able to meet the requirement. There also persists the problem of purification of drinking water. On the other hand, it is estimated that about 40 percent of the available drinking water is being lost through leakage.

Therefore, attention must be paid to the control of leakage and the purification of drinking water along with the extension of drinking water facilities.

The problem of unorganized housing and urbanization has acquired great magnitude. Therefore, there has emerged an urgent need to formulate and implement timely policies and programmes with regard to housing and urbanization.

Against the backdrop of the above mentioned problems and challenges, the elected government formed after the general elections of 1991 has initiated in accordance with its manifesto various efforts for the all-round development of Nepal. The present government now has to undertake the responsibility of achieving the economic order and distortions of the past. Meeting the spirit of the challenge, the

government has been striving for reforms in economic management by according priority to liberal economic policies and rural areas. Similarly, appropriate steps have been taken by the popularly elected government in the direction of creating a favourable climate for the development of the private sector. This has already led to some positive results. Several programmes have been initiated to include the rural sector in the main stream of development. However, the country's basic structure of the economy is still very weak. Compared to the overwhelming expectations and the needs of the people, the achievements are still quite insignificant. The economic growth rate is low and it is essential to bring about qualitative reforms in the economic structure in order to achieve a sustainable and long lasting growth rate. The depth and extent of poverty, unemployment, the growing disparity between rural and urban sectors and unequitable distribution of development efforts on the days to come. The eighth plan is a significant step initiated in that direction.

Appendix 1
The Basis adopted for the analysis of the data
of the review period

Different fiscal years have been taken as base years in the preparation of the foregoing chapter.

(a) The final year of the first five-year plan (1956-1961) was 1960/61. However, before the end of the plan period, the erstwhile democratically elected Nepali congress government was dissolved in December, 1960. subsequently, there were continued efforts from 1961/62 to install panchayat system and as that year was taken as the base year for the second plan (1962-1965) also, the same year i.e. 1961/62 has been taken as the initial year for comparative studies.

(b) The fiscal year 1961/62 remained a year without a plan. No efforts were made that year for the formulation and implementation of plan. As a result, the fiscal year 1961/62 data were not available for certain statistical comparative studies. The year 1960/61 has been taken as the base for the analysis in those sectors where the 1961/62 data were not available.

(c) Similarly, the data of national income projections in Nepal are available only from the year 1964/65. Therefore, the data that require comparison with national income could be made use of only from the year 1964/65 onwards. Besides, because of the unavailability of using the constant prices of 1964/65 as the base for conversion of certain data to constant prices on the basis of GDP, the fiscal year 1964/65 has been taken as the initial year at certain places and the analysis has been made accordingly.

(d) In addition, it is appropriate to evaluate government financial position on the basis of current and constant prices. In transforming certain data related to financial position to constant prices, the use of the urban consumer price indices rather than that of implicit deflators of GDP is more practical. However, as the price indices are available from 1972/73 only, it was possible to process only from that year.

(e) As the data relating to the balance of payments situation are available from the year 1974/75 only, the corresponding analysis has been presented beginning from that year. Nevertheless, in order to assist interested persons interested in undertaking separate analysis and arriving at relevant conclusions, that data pertaining to the fiscal year 1961/62, 1964/65, 1972/73, 1974/75 and 1989/90 have been presented separately in some tables.

Appendix2
Population

Census year	Census day	Total population	Annual growth rate %
1911	15 th Jestha (28 th May)	56,38,749	-
1920	15 th Bhadra (31 st August)	55,73,788	-1.3
1930	Not Available	55,32,574	- 0.07
1941	15 th Falgun 1 st March)	62,83,649	1.16
1952/54	15 th Jestha (28 th May)	82,85,625	2.30
1961	8 th Ashad (22 nd June)	94,12,996	1.65
1971	8 th Ashad (22 nd June)	1,15,55,983	2.07
1981	8 th Ashad (22 nd June)	1,50,22,839	2.66
1991	8 th Ashad (22 nd June)	1,84,62,081	2.08

Appendix 3
Gross Domestic product

(in millions of Rupees)

	1964/65	1974/75	1989/90	1990/91	1991/92	% growth 1964/65- 1989/90	% growth 1989/90- 1991/92
Gross Domestic product (at current price)	6272	16571	90825	105300	130685	11.3	19.9
Agricultural sector	4091	11550	49588	56230	67029	10.5	16.3
Non-agricultural sector	2181	5021	41237	49070	63656	12.5	24.2
Gross Domestic Product (at 1974/75 price)	13329	16571	30367	32052	33055	3.3	4.3
Agricultural sector	8694	11550	18516	19.34	19129	3.1	1.6
Non-Agricultural sector	4635	5021	11851	13018	13926	3.8	8.4
Gross domestic product deflator	-	100.00	299.09	328.53	395.36	-	-
Agricultural sector	-	100.00	267.81	295.42	350.41	-	-
Non Agricultural sector	-	100.00	347.96	376.95	457.09	-	-

Appendix 4
Production Index of Major Agricultural Crops
(Base Year 1974/75=100)

	Weight	1989/90	1990/91	1991/92	Average growth rate 1974/75 - 1989/90 %	growth rate 1989/90-1991/92 %
Food crops	83.720	158.12	161.02	156.02	3.1	-0.7
Paddy	43.023	138.23	142.81	131.41	2.2	-2.5
Maize	20.930	145.28	148.91	145.73	2.5	0.2
Wheat	11.628	258.44	252.70	265.25	6.5	1.3
Millet	6.996	160.65	165.60	163.47	3.2	0.9
Barley	1.163	107.00	108.75	114.48	0.5	3.4
Cash Crops	16.280	179.49	190.22	192.48	4.0	3.6
Sugarcane	1.163	393.08	439.88	513.61	9.6	14.3
Oilseeds	4.651	148.91	139.92	133.58	2.7	-5.3
Tobacco	1.163	137.76	145.69	125.34	2.2	-4.6
Jute	2.326	37.75	38.82	56.08	-6.3	21.9
Potato	6.977	218.49	240.02	238.34	5.3	4.4
All major crops	100.00	161.60	165.77	162.0	3.0	0.1

Appendix 5
Production Index of Major Agricultural Crops
(Base Year 1974/75=100)

Industrial Goods	Weight ²	1989/90	Growth Rate 1974/75-1989/90
Just good	21.51	39.56	-6.0
Sugar	16.39	248.46	6.3
Cigarette	12.23	207.90	5.0
Matches	2.12	188.75	4.3
Liquor	2.10	946.43	16.2
Soaps	1.20	1481.93	19.76
Shoes	3.44	875.16	15.6
Processed Leather	5.44	393.10	9.6
Agricultural tools	0.68	53.67	-4.1
Tea	1.37	427.95	10.2
Stainless Steel Utensils	3.68	137.82	2.2
Bricks & Tiles	4.49	76.21	-1.8
Beer	1.82	1030.65	16.8
Cotton cloths	8.80	117.98	1.1
Cement	7.36	257.56	6.5
Biscuits	2.14	777.04	14.6
Ply wood	0.34	0.00	-
Synthetics	2.89	906.83	15.8
Total Index	100.00	277.62	7.0

Appendix 6
Production Index of Major Manufacturing Products
(Base year 1986/87=100)

	Weight ³ in %	1989/90	1990/91	1991/92 ⁴	Average growth rate 1989/90-1991/92
1. food manufacturing	19.25	133.63	190.25	223.30	29.3
2. Beverages	3.92	158.94	179.95	221.68	18.1
3. cigarettes and bidis	20.11	108.65	113.49	119.96	5.1
4. textiles	18.14	77.05	95.44	118.23	23.9
5. Leather and leather products	2.34	96.83	114.04	83.16	-7.3
6. footwear Manufacturing	0.41	614.88	833.88	997.52	27.4
7. wood and wood products	2.02	9.41	232.44	263.77	22.9
8. Paper and paper products	0.85	195.41	232.87	217.88	5.6
9. Chemical Products	6.05	102.02	120.25	102.83	0.4
10. Rubber products	0.65	174.59	221.44	263.77	22.9
11. plastic products	1.27	213.67	423.25	334.87	25.2
12. other Mineral Products (Non-metallic minerals)	16.85	57.17	93.05	120.45	45.1
13. Iron and steel based products	3.07	105.18	132.08	178.10	30.1
14. steel utensils and agricultural tools	3.17	47.19	60.74	40.22	-7.7
15. Electrical, industrial machinery apparatus, appliances and supplies	1.90	94.04	91.68	133.50	19.1

² Based on the production price (gross) of 18 industrial goods as per 1976/77 industrial census.

³ The given weight age is in accordance with 1985/86 industrial census.

⁴ Preliminary.

Total index	100.00	100.58	129.72	150.08	22.2
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Appendix 7
Consumption, Investment and Saving
(at current price)

(in millions of Rupees)

	1974/75	1989/90*	1990/91**	Percentage of total Gross Domestic Product 1974/75	percentage of total Gross Domestic Product 1989/90*	Percentage of total gross Domestic Product 1990/91**
1. Consumption	14909	85265	94836	90.0	93.9	93.5
Government sector	1257	10394	10486	7.6	11.5	10.0
Non Government sector	13652	74871	87950	82.4	82.4	83.5
2. Investment	2402	16476	21163	14.5	18.1	20.1
Gross fixed capital formation	(2223)	(14402)	(19720)	(13.4)	(15.9)	(18.7)
Government sector	505	6747	6998	3.0	9.4	6.6
Non government sector	1718	7655	12722	10.4	8.4	12.1
Change in stock	(179)	(2074)	(1443)	(1.1)	(2.3)	(1.4)
3. Foreign saving	-740	-10916	-14299	-4.5	-12.0	-13.0
Import of goods and services	2215	21789	28727	13.4	24.0	27.3
Export of good and services	1475	10873	14428	8.8	12.0	13.7
4. Gross Domestic Production	16571	90825	105300	100.0	100.0	100.0
5. gross Domestic saving	1662	5560	6864	10.0	6.1	6.5

* preliminary revised estimate.

** preliminary estimate.

Appendix 8
Development Expenditure

(in millions of Rupees)

	At current price	At 1972/72 constant price	Share in Gross Domestic Product (%) at Current Price	Share in Gross Domestic Product(%) at constant Price***
1961/62	86.2	-	-	-
1964/65	231.9	-	-	-
1972/73	608.6	608.6	5.5	4.6
1984/85	5488.7	1954.0	12.4	8.3
1989/90	12997.5	2677.2	14.3	8.8
Growth rate 1972/73-1989/90	19.7	9.1	-	-
1990/91	15979.5*	2997.5	15.2	9.4
1991/92**	14945.7	2320.8	11.4	7.0
Growth rate 1989/90-1991/92	7.2	6.9		

* Including Rs. 3272.7 Million for fiscal reforms programme.

** Revised estimate.

*** Development Expenditure at 1972/73 constant price and gross Domestic Product at 1974/75 Constant price.

Appendix 9

Revenue Composition

	Growth Rate 1972/73-1989/90		Growth Rate 1989/90-1999/92		Share in GDP (in percentage)				
	At current price	At constant price	At current price	At constant price	At current price***			At Constant price ***	
					1972/73	1989/90	20991/92	1989/90	1991/92
Tax revenue	16.8	6.4	17.2	1.7	3.1	8.0	7.4	4.9	4.7
Indirect tax	17.3	6.9	20.3	4.4	2.3	6.4	6.5	4.0	4.3
Direct tax#	14.9	4.7	3.4	-10.2	0.8	1.6	1.2	0.9	0.7
Non tax Revenue	19.7	9.0	28.4	11.5	0.6	2.2	.5	1.4	1.6
Total Revenue	17.3	6.9	19.7	3.9	3.9	10.2	10.2	6.3	6.2

Direct tax include land tax and registration, income, profit and wealth tax.

** Revised estimate.

*** Revenue at 1972/73 Constant Prices and Gorss Domestic Product at 1974/75.

Appendix 10
Regular Expenditure

(in million of Rupees)

	At current price	At 1972/73 constant price	Share in GDP (in Percentage)	
			At current Price	At 1974/75 Constant price
1961/62	103.5	-	-	-
1964/65	117.9	-	-	-
1972/73	374.2	374.2	6.0	2.8
1974/75	546.5	396.0	3.3	2.4
1989/90	6671.8	1374.5	7.3	4.5
Growth rate 1972/73-1989/90	18.5	7.9	-	-
1990/91	7570.3	1420.1	7.2	4.4
1991/92	9629.0	1495.2	7.4	4.5
Growth 1989/90-1991/92	20.1	4.3	-	-

Appendix 11 Revenue Surplus

(in million of Rupees)

	At current price	At 1972/73 constant price	Share in GDP (in Percentage)	
			At current Price	At constant Price *
1961/62	-1.25	-	-	-
1964/65	7.44	-	1.2	-
1972/73	24.16	24.16	2.2	1.6
1974/75	46.19	33.47	2.8	2.0
1989/90	261.57	53.89	2.9	1.8
Growth Rate 1972/73-1989/90	15.0	4.8	-	-
1990/91	315.97	59.27	3.0	1.8
1991/92	365.96	56.83	2.8	1.7
Growth Rate 1989/90 – 1991/92	18.3	2.7	-	-

* The Revenue Surplus at 1972/73 constant price and gross Domestic Product at 1974/75 constant price.

Appendix 12 Deficit Finance*

(in million of Rupees)

	At Current Price	At 1972/73 Constant price	Share in GDP (in Percentage)		Share of Deficit Finance in Internal Resources%
			At Current Price	At 1972/73 Constant Price	
1961/62	27.9	-	-	-	181.2
1964/65	10.7	-	0.2	-	12.6
1972/73	139.3	139.3	1.2	0.9	36.6
1974/75	118.5	85.9	0.7	0.5	20.4
1989/90	2446.8	504.1	2.7	1.7	48.3
Growth Rate 1972/73-1989/90	18.4	7.9	-	-	-
1990/91	12819.8	2404.8	12.2	7.5	166.2
1991/92	1271.5	197.4	1.0	0.6	22.1
Growth Rate 1989/90-1991/92	-27.9	-37.4	-	-	-

* Including internal load and cash balance.

Appendix 13 Foreign Aid

(in Percentage)

	Share of Foreign Aid in Development Expenditure	Share of loans in Total Foreign Aid
1961/62	82.1	1.6
1964/65	63.3	3.9
1972/73	37.4	20.8
1974/75	40.0	26.9
1989/90	61.1	75.1
1990/91	52.7	74.3
1991/92	62.4	75.8

Appendix 14
Actual Position Of Government Finance
(at Current Price)

(In Millions of Rupees)

	1961/62*	1964/65	1972/73	1974/75	1989/90	1990/91	1991/92*	Percentage increase 1972/73-1989/90	Percentage increase 1989/90-1991/92
Development Expenditure	86.2	231.9	608.6	967.2	12997.5	15979.5	14945.7	19.7	7.2
Sources of Expenditure Internal Resource	15.4	85.1	380.9	580.4	5062.5	7712.4	5613.7	16.4	6.6
a. Revenue Surplus	12.5	74.2	241.6	461.9	2615.7	3159.7	3674.2	15.0	18.3
i) Revenue	91.0	192.3	615.8	1008.4	9287.5	10730.0	13303.2	17.3	19.7
ii) Regular Expenditure	103.5	117.9	374.2	546.5	6671.8	7570.3	6929.0	18.4	20.1
b. Deficit Finance	27.9	10.7	139.3	118.5	2446.8	12819.8	1939.4	18.4	-27.9
i) Internal Loan (credit)	27.9	7.5	50.0	100.0	2157.0	4552.7	2082.2	24.8	-1.8
ii) other **	-	3.2	89.3	18.5	296.8	-	-142.8	7.3	-
c) Foreign Aid	70.8	146.8	227.7	386.8	7935.0	8421.4	9332.0	23.2	8.4
Grant	69.6	141.0	180.3	282.8	1975.4	2164.7	2256.4	15.1	6.9
Loan (in gross)	1.2	5.8	47.4	104.0	5959.6	6256.7	7075.6	32.9	9.0

* Revised Estimate.

** Including internal loan and stock.

Including Rs. 3272.7 for fiscal reforms programme.

Appendix 15
Actual Position of Government Finance
(at 1972/73 Constant Price*)

(In Millions of Rupees)

	1972/73	1974/75	1989/90	1990/91	1991/92*	Percentage increase 1972/73-1989/90	Percentage increase 1989/90-1991/92
Development Expenditure	6.8.6	700.9	2677.7	2997.5	2320.8	9.1	-6.9
Sources of Expenditure Internal Source	380.9	420.6	1042.9	1446.7	839.8	6.1	-7.4
Revenue Surplus	241.6	334.7	538.9	592.7	568.3	4.8	2.7
Revenue	615.8	730.3	1913.4	2012.8	2065.7	6.9	3.9
Regular Expenditure	374.2	396.0	1374.5	1420.1	1495.2	7.9	4.3
Deficit Finance	139.3	85.9	504.1	2404.8	197.4	7.9	-37.4
Internal Loan Credit	50.0	72.5	442.9	854.0	323.3	13.7	-14.6
Other **	89.3	13.4	61.2	-	-	-2.2	-
Foreign Aid	227.7	280.3	1634.7	1579.7	1449.1	12.3	-5.8
Grant	180.3	204.9	407.0	406.1	350.4	4.9	-7.2
Loan (in gross)	47.4	75.4	1227.7	1173.6	1098.7	21.1	-5.4

* Based on Urban National Consumer Price Index Data which are available only from the year 1972/73.

** Including Internal loan and stock.

Including Rs. 3272.7 million for fiscal reforms programme.

Appendix 16
Factors Affecting Money Supply
(at current Price)

(In Millions of Rupees)

	1962 July	1989 July	1990 July	1991 July	Annual Change				Annual Growth Rate (in%) 1962 July- 1990 July	Annual Growth Rate (in%) 1989 July- 1991 July
					1964/65	1974/75	1989/90	1990/91		
1. Foreign Assets (Net)	236.1	6203.5	9338.9	16160.7	68.1	-422.4	3135.4	6812.8	14.0	61.4
Gross Domestic Credit	45.2	26584.3	29661.6	34482.4	22.3	667.6	3077.3	4829.8	26.1	13.1
Net Claims on Government	- 12.5	12345.1	13940.2	16812.4	-10.7	145.8	1595.1	881.2	28.5	16.7
Claims on Government	77.3	12345.1	13940.2	16922.6	5.8	116.5	1595.1	2981.4	-	17.1
Government Deposit (increase)	89.9	-	-	-110.2	16.5	29.3	-	106.0	-	-
b. Claims on Public Enterprises	-	2998.2	2828.2	2087.6	12.3	440.1	-170.0	-628.9	13.1	-16.6
Financial	-	830.3	799.8	754.7	-0.6	88.4	-30.5	63.6	-	-4.9
Non Financial	-	2167.9	2028.4	1335.9	12.9	351.7	-139.5	692.5	-	-21.5
c. Claims on Private Sector	57.7	11240	12993.2	15582.4	20.7	81.7	652.2	699.2	21.3	17.7
3. Time deposits increase	35.5	14829.7	17329.4	21428.9	3.8	96.8	2500	4099.5	24.7	20.2
4. Net Capital and Other items (net Growth)	1.6	6182.7	7448.1	12930.6	6.0	91.8	1265.4	5482.5	35.2	44.6
Money Supply (M1)	244.2	11775.4	16283.6	16283.6	80.6	56.6	2447.6	2060.6	15.6	17.6
Currency	156.2	7946.6	11656.5	97718.2	61.0	37.9	1771.6	1936.3	15.9	21.1
5. Money Supply (M1) - Currency Demand Deposits	88.0	3828.8	4504.8	4504.8	19.6	18.7	676.0	124.3	15.1	9.9
6. Broad Money Supply (M2)	279.7	26605.1	31552.4	31552.4	84.4	153.4	4977.4	6160.1	17.7	19.0

Appendix 17
Sources of Funds and their use by commercial Banks
(at current Price)

(In Millions of Rupees)

	1962 July	Annual Change				1989 July	1990 July	1991 July	Annual Increase %	
		1964/65	1974/75	1989/90	1990/91				1962 1990 (%)	July- 1991 July (%)
Source of Funds	92.9	22.6	520.2	3717.6	6966	21041.7	24759.3	31725.6	22.1	22.8
1 Total Deposits	79.3	15.4	229.3	2930.4	4802.0	18954.6	21885	2687.5	22.2	18.7
a. Demand	43.8	11.6	132.8	269.7	489	3924.0	4293.7	4782.4	17.8	10.4
b. Saving	6.0	3.3	14.6	896.4	1453	4321.8	5218.2	6671.5	27.3	24.2
c. Fixed	29.5	0.5	105.4	1716.8	2621	10044.7	11762	14382.6	23.8	19.7
d. Margin	-	-	- 23.5	- 52.5	239	664.1	611.6	851	-	13.2
2. Borrowing from Nepal Rastra Bank	-	-	217.9	- 109.6	-13	160.1	50.5	37.2	-	-51.8
3. Other foreign Liabilities	-	-	2.4	-38.3	11	3880.7	0.5	11.4	-	-45.8
4. Other Liabilities	13.6	7.2	70.6	935.1	2166	1888.2	2823.3	4989.5	42.7	62.5
Uses of Total Funds	92.9	22.6	520.2	3717.6	6966	21041.7	24759.3	31725.6	22.1	22.8
5. Cash in Hands	35.4	3.9	87.5	2065	1473	3777.2	5842.2	7315.1	20.0	39.2
a. Cash Bal.	5.6	-0.8	10.0	46.9	146	761.3	808.2	953.9	25.7	11.9
b. Balance with Nepal Rastra Bank	9.0	4.1	51.1	1049.0	613.0	1502.6	2551.6	3164.8	22.3	45.1
c. Foreign Currency	7.6	2.0	-0.5	97.0	57	199.8	298.8	353.9	14.0	33.1
d. Balance held abroad	13.2	-1.4	26.9	872.1	675	1313.5	2185.6	2842.5	20.0	47.1
6. Loan and Advances	57.5	18.7	432.7	1652.6	5493	17265.5	18917	24410.5	23.0	18.9
a. Claims on government	-	0.3	2.1	-189	3761	3771.4	3582.5	7373.1	-	39.5
b. Claims on government enterprises	-	-	347.6	-139.4	-692	2188.7	2049.3	1357.0	-	-21.3
c. Claims on private sector	57.5	18.4	79.8	1769	2293	10963.8	12733.0	15026.8	21.3	17.1
d. Foreign bills purchases and discounted	-	-	3.2	212	131	340.6	552.6	683.6	-	41.7
7. Loans investment and Gross Deposit ratio*	61.9	-	-	-	-	71.2	70.1	64.0		

* Excluding the loans to HMG

Appendix 18
National Urban Consumer's Price Index
(Base year 1972/73=100)

Fiscal year	Food & Beverages	Annual Change In percentage	Non-Food items and services	Annual Change in Percentage	Index of all goods & Services	Annual Change in percentage
1972/73	100.0	-	100.0	-	100.0	-
1973/74	122.1	22.1	109.5	9.5	118.2	18.2
1974/75	141.4	15.8	130.3	19.0	138.0	16.8
1989/90	492.8	12.4	476.1	10.0	485.4	11.6
Growth Rate 1972/73-1989/90	-	9.8	-	9.6	-	9.7
1990/91	542.9	10.2	519.7	9.2	533.1	9.8
1991/92	672.6	23.9	597.9	15.0	644.0	20.8
Growth Rate 1989/90-1991/92	-	16.8	-	12.1	-	15.2

Appendix 19
Direction of Foreign Trade
(At Current price)

(in Millions of Rupees)

Description	1961/62	1964/65	1972/73	1974/75	1989/90	1990/91	1991/92	Growth Rate % 1961/62-1989/90	Growth Rate% 1989/90-1991/92
Exports (F.O.B.)	265.2	440.6	631.5	889.6	5235.5	7603.7	13939.4	11.2	63.2
India	253.4	433.2	496.4	746.7	666.6	1701.2	1568.9	3.5	53.4
Other countries	11.8	7.4	135.1	142.9	4568.9	5902.5	12370.5	23.7	64.5
Import (C.I.F.)	444.4	818.9	983.8	1814.6	18401.5	24197.9	32951.3	14.2	33.8
India	439.7	8.6.4	872.0	1475.7	4646.3	7772.4	11815.9	8.8	59.5
Other countries	4.7	12.5	111.8	338.9	13755.2	16425.5	21135.4	33.0	24.0
Balance of Trade	-179.2	-378.3	-352.3	-925.0	-13166.0	-16594.2	-19011.9	-16.6	-20.2
India	-886.3	-373.2	-375.6	-729.0	-3979.7	-6071.2	-10247.0	-11.6	-60.5
Other Countries	7.1	-5.1	23.3	-196.0	-9186.3	-10523.0	-8764.9	-29.2	-2.3
Total trade	709.6	1259.5	1615.3	2704.2	23637.0	31801.6	4689.7	13.3	41.7
India	693.1	1241.6	1368.4	2222.4	53129	9473.6	13384.8	7.5	58.7
Other countries	16.5	17.9	246.9	481.8	18324.1	22328.0	33505.9	28.5	35.3
Share of Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	=	=
Trade%	797.7	98.6	84.7	82.2	22.7	29.8	28.5	-	-
India	2.3	1.4	15.3	17.8	77.3	70.2	71.5	-	-

Appendix 20
Composition of Export Trade
(at Current Price)

(in Millions of Rupees)

Description	1961/62	1964/65	1974/75*	1989/90	1990/91	1991/92	Growth Rate % 1961/62-1989/90	Growth Rate% 1989/90-1991/92
a) Food Products and raw materials	228.6	384.7	735.1	891.1	1661.7	2696.4	5.0	74.0
Food and live animal	174.1	258.9	517.5	648.0	1120.1	2096.4	5.2	79.9
Tobacco and beverages	2.1	1.1	0.4	2.1	26.6	4.1	-0.6	39.7
Crude materials	50.6	116.0	213.3	226.0	329.3	477.1	6.1	45.4
Indedible Mineral fuels and lubricants	0.1	0.0	1.5	-	-	-	-	-
Vegetable and animal oils and fats oils and fats	1.7	8.7	2.4	15.0	185.7	120.2	11.6	138.1
b. Manufactured goods	36.1	55.5	89.4	4326.1	5941.7	11241.0	11.6	61.2
Chemicals and drugs	0.1	1.8	0.9	21.0	34.3	31.2	21.0	21.9
Manufactured goods Classified by materials	34.4	50.4	28.1	27525.0	4357.3	7627.5	29.6	67.6
Transport and machinery equipment								
Miscellaneous manufactured articles	0.1	0.1	2.1	0.1	0.2	0.3	-	73.2
	1.5	3.2	58.3	1580.0	1549.9	3582.0	28.5	50.5
C. Miscellaneous	0.5	0.3	12.1	-	0.3	-	-	-
Total Exports Share of exports in Gross Domestic Product	265.2	440.5	836.6	5217.2	7603.7	13939.4	11.2	63.5
	-	7.0	5.0	5.7	7.2	10.7	-	-

* Available only for the first II months as per the classification of SITC

Appendix 21
Composition of import Trade
(at Current Price)

(in Millions of Rupees)

Description	1961/62	1964/65	1974/75*	1989/90	1990/91	1991/92	Growth Rate % 1961/62-1989/90	Growth Rate% 1989/90-1991/92
a) Food Products and raw materials	176	332.3	515.5	5287.0	7475.0	12059.3	12.9	5.10
Food and live animal	63.8	102.2	234.1	1549.0	2073.7	3670.2	12.1	53.9
Tobacco and beverages	39.3	58.8	18.9	264.0	345.3	152.1	7.0	-24.1
Crude materials	25.9	82.3	63.8	1475.0	2051.9	3750.5	15.5	59.5
Indedible Mineral fuels and lubricants	36.5	72.3	182.7	1522.0	2284.6	3673	14.2	55.3
Vegetable and animal oils and fats oils and fats	11.1	16.7	7.0	477.0	719.5	813.5	14.4	30.6
b. Manufactured goods	264.4	485.7	1157.2	13119.0	16720.9	20717.4	15.0	24.01
Chemicals and drugs	23.7	37.9	179.5	2862.0	3027.0	4437.1	18.7	24.5
Manufactured goods Classified by materials	192.7	352.6	509.5	5163.0	6301.3	8750.6	12.5	30.2
Transport and machinery equipment	24.8	53.3	270.1	3811.0	6079.9	5873.2	19.7	24.1
Miscellaneous manufactured articles	23.2	41.9	198.1	1283.0	1312.7	1656.5	17.0	-6.2
C. Miscellaneous	3.4	0.9	29.9	0.1	2.0	174.6	-11.8	4078.5
Total imports	444.4	818.9	1702.6	18506.1	24197.9	32951.3	14.2	33.8
Share of imports in Gross Domestic Product	-	13.1	0.9	20.3	23.0	25.2	-	-

* Available only for the first II months as per the classification of SITC.

Appendix 22
Balance of Payment situation
(at Current Price)

(in Millions of Rupees)

Description	1974/75	1989/90	1990/91	1991/92*	Growth Rate % 1961/62- 1989/90	Growth Rate% 1989/90- 1991/92
Trade Balance	- 925.0	-13186.2	-16607.6	-1732.5	-19.4	14.5
Export (F.O.B)	889.6	5169.5	7619.5	12736.0	12.4	57.0
Import (C.I.F)	1814.6	18355.7	24227.1	30038.5	16.7	27.9
Services Income, Net	280.8	2613.2	1691.5	3855.8	16.0	21.5
Receipts from service	(-693.3)	(6368.0)	(7679.0)	(10737.6)	(15.9)	29.9
Tourism	170.6	3121.2	3587.6	4663.2	7.6	22.2
Investment income	108.7	651.2	856.5	969.4	12.7	22.0
Others	414.0	2595.6	3234.9	5105.0	13.0	40.2
Service payments	(412.5)	(3754.8)	(4987.5)	(6881.8)	(15.9)	(35.4)
Transfer Income, Net	523.9	2818.9	3661.2	3868.6	11.9	17.1
Transfer receipts	(557.9)	(3028.7)	(4040.5)	(4047.9)	(11.9)	(15.6)
Private remittances	204.3	1784.2	2128.3	2177.8	15.5)	10.5
Foreign grants	242.0	1072.7	1694.0	1399.9	10.4	14.2
Indian excise refund	108.2	0.2	188.0	422.0	34.3	4493.5
Others	3.4	171.6	30.2	48.2	29.9	-47.0
Transfer payments	(34.0)	(209.8)	(379.3)	(179.3)	(12.9)	(-7.6)
Current Account, Net	-120.3	-7754.1	-10254.9	-9578.1	-32.0	-11.1
Foreign loan, Net	86.7	5888.8	6300.0	6158.1	32.5	2.3
Foreign Loan	(104.0)	(6617.6)	(7154.0)	(7342.1)	(31.9)	(5.3)
Principal repayment	(17.3)	(728.8)	(854.0)	(1184.0)	(31.9)	(27.5)
Capital and Unclassified amount, Net	388.8	4514.9	8736.1	7726.6	17.8	30.8
Surplus or deficit(-)	355.2	2649.6	4781.2	4306.6	14.3	27.5

* For the first eleven months only.

Appendix 23
Foreign Exchange Holdings of Banking System

(in Millions of Rupees)

Description	1961 July	1965 July	1975 July	1985 July	1989 July	1990 July	1991* July	Annual Growth 1961 July-1990 July (%)	Annual Growth 1989 July-1991 July (%)
1. Gold, I.M.F. Tranche and S.D.R.	14.0	25.2	116.3	239.2	380.2	424.6	613.4	12.5	25.0
2. Convertible foreign exchange	73.7	196.4	1023.0	1878.9	7536.9	9441.9	1604.4	18.2	47.5
3. Non-Convertible foreign exchange	119.2	227.9	272.7	504.5	773.9	2118.1	2252.2	10.4	70.6
Total	206.9	449.5	1412.0	2622.6	8691.0	11984.6	19270.0	15.0	48.8
Capacity to sustain Import (in months)	5.8	6.2	8.6	3.7	6.1	7.6	9.2	-	-

* Provisional.

Appendix 24
Production of major Food Crops

(in 000 metric tons)

	1961/62	1964/65	1974/75	1989/90	1990/91	1991/92	Annual Growth rate 1961/62-1989/90(%)	Annual Growth rate 1989/90-1991/92(%)
Food Crops	3152	3270	3776	5698	5829	5450	2.1	-2.2
Paddy	2108	2201	2452	3390	3502	3223	1.7	-2.5
Wheat	138	126	331	855	836	765*	6.7	-5.4
Maize	843	854	827	1201	1231	1205	1.3	0.2
Millet	63	63	140	225	232	229	4.6	0.8
Barley	NA	26	26	27	28	28*	0.1	1.8

* Preliminary Estimates.

Appendix 25
Area covered by Major food Crops

(in '000 ha.)

	1961/62	1964/65	1974/75	1989/90	1990/91	1991/92	Annual Growth rate 1961/62-1989/90(%)	Annual Growth rate 1989/90-1991/92(%)
Food Crops	1632	1731	2142	3011	3035	2966	2.2	-0.7
Paddy	1088	1101	1240	1433	1455	1412	1.0	-0.7
Wheat	112	100	291	604	593	572*	6.2	-2.7
Maize	432	437	458	751	758	754	2.0	2.0
Millet	NA	69	125	193	199	198	4.2	1.3
Barley	NA	24	28	30	30	30*	0.9	-

* Preliminary Estimates.

Appendix 26
Productivity of Principal Food Crops

(metric ton/ha.)

	1961/62	1964/65	1974/75	1989/90	1990/91	1991/92	Annual Growth rate 1961/62-1989/90(%)	Annual Growth rate 1989/90-1991/92(%)
Food Crops	1.931	1.889	1.763	1.892	1.921	1.837	-0.1	-1.5
Paddy	1.937	1.999	1.977	2.366	2.4.7	2.283	0.7	-1.7
Wheat	1.232	1.260	1.137	1.416	1.410	1.337*	0.5	-2.8
Maize	1.951	1.954	1.806	1.599	1.624	1.598	-.8	-0.03
Millet	NA	0.913	1.120	1.166	1.166	1.157	1.0	-0.3
Barley	NA	1.083	0.929	0.900	0.933	0.933	-0.7	1.8

* Preliminary estimates.

Appendix 27
Productivity of Principal Food Crops

(in'000M.T)

	1961/62	1964/65	1974/75	1989/90	1990/91	1991/92	Annual Growth rate 1961/62-1989/90(%)	Annual Growth rate 1989/90-1991/92(%)
Cash Crops	233	511	670	1780	1959	2137	11.9+	9.6
Sugarcane	139	126	251	988	11.6	1291*	7.3	14.3
Oil-seeds	48	51	66	98	92	88*	2.6	-5.2
Tobacco	9	9	5	7	7	6*	-0.9	-7.4
Jute	37	39	41	16	16	19	-3.0	9.0
Potato	NA	286	307	671	738	733*	3.5	4.5

* Preliminary estimates.

+ Increased at the rate of 5.1% from 1964/65-1989/90.

Appendix 28
Area covered by Major Cash Crops

(in '00ha.)

	1961/62	1964/65	1974/75	1989/90	1990/91	1991/92	Annual Growth rate 1961/62-1989/90(%)	Annual Growth rate 1989/90-1991/92(%)
Cash Crops	30	186	221	290	294*	299	8.4+	1.5
Sugarcane	N.A	9	15	32	33	37*	5.2	7.5
Oil-seeds	N.A	108	112	154	156	155*	1.4	0.3
Tobacco	N.A.	8	7	8	7	7*	-	6.5
Jute	30	32	33	13	14	15	-2.7	1.2
Potato	N.A.	29	54	83	84	85*	4.3	-

* Preliminary estimates.

+ Increased at the rate of 1.8% from 1964/65-1989/90.

Appendix 29
Productivity of Major Cash Crops

(in M.ton/ha.)

	1961/62**	1964/65	1974/75	1989/90	1990/91	1991/92	Annual Growth rate 1961/62-1989/90(%)	Annual Growth rate 1989/90-1991/92(%)
Cash Crops	88	2.747	3.032	6.138	5.303	7.147	3.3*	7.9
Sugarcane	N.A	14.000	16.733	30.875	33.513	34.892	3.2*	6.3
Oil-seeds	N.A	0.472	0.589	0.636	0.590	0.568	1.2*	-5.5
Tobacco	N.A.	1.125	0.714	0.875	1.000	0.857	-1.0*	-1.0
Jute	1.233	1.219	1.242	1.143	1.43	1.267	-0.3*	5.3
Potato	N.A.	9.862	5.685	8.084	8.786	8.624	-0.8*	3.3

* Growth rate during 1964/65-1989/90.

** Productivity of some major cash crops are not computed due to unavailability of 1961/62 data related to production area covered by such cash crops.

Appendix 30
Irrigation Situation

Fiscal year situation of 1960/61	Irrigated Area (in hectare) 11428
1964/65	1,035 Additional
1969/70	52,860 Additional
1974/75	37,733 Additional
1979/80	95,425 Additional
1989/90	1,79,337 Additional
Situation up to 1989/90	5,50,467
1990/91	20,810 Additional
1991/92	27,527 Additional
Situation up to 1991/92	5,98,804

Appendix 31
Situation of Road Transport

Length: in Kilometer

	1960/61	1974/75	1989/90	1990/91	1991/92*
Road	1198	3173	7330	8328	581
a. Blacktopped	339	1549	2958	3083	107
b. Gravelled	-	667	1658	2181	103
c. Fair weather	859	957	2714	3064	371
Ration of road /Population	1:7780	1:3990	1:2441	1:2194	--

* Additional estimation.

Appendix 32
Primary Education

(in thousand)

	School	Teachers	Students	School-Student Ratio	Teacher-Student Ratio
1961	4.001	7.331	182.533	1.46	1.25
1964	N.A	N.A	N.A	N.A	N.A
1972	7.634	18.25	242.611	1.32	1.13
1974	8.267	17.738	401.030	1:48	1.23
1990	17.842	71.213	2788.644	1:156	1:39
1991*	18.681	74.849	2926.000	1:157	1:39

* Estimated.

Appendix 33
Lower Secondary Education

(in thousand)

	Schools	Teachers	Students	School-Student Ration	Teacher-student Ration
1961	N.A	N.A	N.A	N.A	N.A
1964	N.A	N.A	N.A	N.A	N.A
1972	0.677	N.A	136.010	1:201	N.A
1974	1.880	6.062	160.260	1:85	1:26
1990	3.964	12.399	344.138	1:87	1:28
1991*	4.092	13.207	381.000	1:93	1:29

* Estimated.

Appendix 34
Secondary Schools

(in thousand)

	Schools	Teachers	Students	School-Student Ration	Teacher-student Ration
1961	0.156	1.772	26.845	1:172	1:15
1964	N.A	N.A	N.A	N.A	N.A
1972	0.494	2.661	41.049	1:83	1:15*
1974	0.475	3.422	61.325	1:129	1:18
1990	1.950	10.421	364.525	1:187	1:35
1991**	2.081	11.383	386.000	1:185	1:34

* Including primary and lower secondary teacher.

** Estimated.

Appendix 35
Extension of Health Facilities

	Upto 1961	Upto 1964	Upto 1972	Upto 1974	1991
1. Hospital	39	42	55	58	111
2. Hospital beds	1,019	1,157	2,006	2,008	4,768
3. Health posts	55	N.A	231	351	816
4. Health centres #	93	101	38	35	18
5. Ayurvedic Clinics	63	N.A	N.A	196	24,000
6. Doctors					1,182
7. Nurses (women Health Workers)	N.A.	N.A	N.A	196	24,000
8. Ratio of Hospital bed and Population	-	-	-	-	15,800

The number of the health centres in on the decline as the health centers are being gradually converted to 15 bed hospitals.

Appendix 36
Health Indicators

Description	1960/61	1973/74	1989/90	1990/91	1991/90*
Infant Mortality Rate (per thousand)	197	156	128	107	102
Child Mortality Rate (per thousand)	222	197	197	197	165
Crude Birth Rate (per thousand)	45.50	44.7	41.56	39.60	39.60
Crude death Rate (per thousand)	30.37	22.2	16.10	14.85	14.00
Lief expectancy	27.6	40.9	53.5	54.02	54.02

* Estimated.

Part – II

Conceptual Framework, Objectives and Investment of the Eighth Plan

Conceptual Framework of Development in the Eighth Plan

The people have, subsequent to the restoration of democracy through the historic people's movement of 1990, entrusted the responsibility of the country's development to the Nepali congress by giving its mandate with a clear majority in the general elections. It is certainly not an easy task to accelerate the pace of development in a distorted economic, social and administrative milieu created by the panchayat regime during the last thirty years. While, on the one hand, the government will definitely have to make some harsh decisions, the development perspectives, on the other hand, will need to be compatible with the prevailing national situation and the economic changes in the international scenario. As Nepali congress is committed to democratic socialism, the principal objective of the economic policy will be the amelioration of the standard of living of the deprived citizens through democratic processes. Socialism, as conceived by the Nepali congress, is not orthodox socialism where the state dictates but the one by virtue of which the state in a supportive role will bring about social and economic justice through increase in production, creation of employment and special programmes directed towards the upliftment of the socially and economically deprived poor people who are left out of the mainstream of development.

It is evident from the changes occurring in the socialist countries that the traditional state directed socialism is no longer suited to the existing global economic scenario. Therefore, the state directed and controlled economic systems pursued for the last thirty years will be gradually phased out and policies will be adopted to carry out development through free market-oriented liberal economic systems. In this perspective, the goals and objectives defined in the Eighth plan will be considered as indicative and as guidelines, the fulfillment of which requires the participation and support of all sections of the nation together with the capabilities of the state.

The experience of several developing nations has demonstrated the fallacy of the concept that an high economic plans in Nepal, too, in the past were based on this concept and the consequences turned out to be quite contradictory. Neither the targeted growth rate was achieved, nor was poverty alleviated. This fact clearly indicates that for economic growth social and administrative reforms must concomitantly accompany capital investment. In view of this fact during the Eighth plan period, a conducive environment will be created for development by complementing capital investment with reforms in the age-old traditional social norms and values and inefficient administrative system fostered by the panchayat regime. As efforts aimed at raising the economic growth rate do not necessarily benefit the poor to a significant extent, special programmes will be undertaken for poverty alleviation at village level and household level.

Since continuity in development can not be achieved without a sustained rate of growth, this plan will adopt a self-sustainable development process from the village level onwards. For this purpose, it is necessary to develop and mobilize human resources from the village level, to develop and extend the infrastructure for rural development and to attain minimum standard of living for the common rural populace. As this kind of development can not be achieved through traditional planning system, the pronouncement of late B.P. Koirala—"Plans or budgets should be formulated with the peasant in mind ... every Nepali should have a small house to live in and a milk cow in the court yard" will serve as the guideline in making decisions concerning development programmes in the Eighth plan. While allocating government expenditure, rural and backward areas will receive priority in order to build infrastructure for development such as extension of roads and irrigation, to make institutional and technical improvements in the agricultural system. To create employment opportunities for the rural population and to meet basic needs such as education, health care, drinking water and housing. For this purpose, the budgetary allocation of funds for rural development will be increased to seventy percent of the total development budget outlay.

This new philosophy of planning will be reflected in the procedural structure and methodology of the plan. Development is not merely a mechanical function of capital and technology but it is also a social and political process of mobilizing and organizing people commensurate with the desired goals. It is essential to canalize the aspirations and enthusiasm of the people generated by the political change in the country to the mainstream of development, and to identify, formulate, implement and distribute the benefits thereof on the basis of people's participation. Compatible with the nature of projects and development

programmes, conducive environment will be created to involve peasants, laborers and entrepreneurs, engaging the concerned people themselves and the central and effective source of all actions and decisions. The proposed planning methodology will create a basis for sustained development by promoting development initiatives at the community level by enhancing mass awareness for self-development, fostering civic responsibility and self-reliance. In order to fully translate such development process into practice, the Government will adopt the policy of decentralization. Although the panchayat regime had also made provisions for decentralization, it was not implemented effectively. Authority was not decentralized to local level bodies. Since these bodies were directed by both the concerned ministries and local administration, a state of confusion prevailed in their work performance. The present democratic government will do away with such tradition and effectively implement policies of decentralization in all sectors. In accordance with the policies of democratic socialism, the formulation of plans will eliminate the top down approach to be replaced by the bottom up approach. As long as the development of the people, for the people and by the people is not institutionalized, possibly a conducive atmosphere may not be created for the realization of development among the common masses of the population. In order to create such environment the government has already authorized local bodies to select, formulate and implement development projects, to allocate the distribution of benefits derived through such projects. For the purpose of avoiding delays in the implementation of development projects, the methods of the disbursement of funds will be simplified and the allocated funds made available in good time. Similarly, local bodies will be empowered to approve tenders for the supply of construction materials and the construction services for local development projects. In order to avoid the lack of on-side data and information necessary for the selection of development programmes at the local level, data will be collected and maintained up-to-date at the district level on a regular basis.

Concomitantly with the decentralization of authority, the local bodies will be motivated to bear responsibilities. While village level bodies will be accountable to the district level bodies, they in turn, will be accountable to the centre. It will be made mandatory that the bodies at all levels keep their accounts transparent. As the success of the decentralization programme depends to a large extent on the abilities and attitudes of the local level employees, arrangements will be made for upgrading their work-performance through training and career development opportunities.

In spite of the slogans of balanced development having been raised even during the panchayat regime, development efforts were comparatively concentrated in developed and urban areas, which gave rise to great social and economic disparities among the regions. The wide disparity in economic and social facilities between the rural and urban areas has led to unprecedented increase in migration to urban areas. This has, on the one hand, exerted heavy pressure on drinking water supply system, education health care and transports and also led to greater pollution in urban area, while on the other, the economic and social conditions in the rural areas have further worsened. With a view to rectify these anomalies, in this context, complementary enterprises and economic activities compatible with the regional means and resources will be implemented. The balanced development of all sectors is equally important in view of the government's commitment to rural development and upliftment of the standard of living of the poor people. Regional development will be linked to the village level development and a suitable atmosphere for all citizens to share the returns of the nation's investment will be created. To promote regional balance, special grants will be made available during the eighth plan for specific projects on addition to the lump sum government grants to the regions. The local bodies upon mutual consultations and agreement may use the funds thus provided for specified projects on the basis of regional necessities. The optimum utilization of regionally available means and resources will also enhance the national production.

As agriculture is the backbone of the national economy and the livelihood of 90 percent of population is associated with this sector, the eighth plan lays special emphasis on the development and modernization of the agricultural sector. The agricultural development also deserves priority as this alone can increase the income of the common people and thereby expand internal market for industrial sector. Low cost farming activities with higher rate of return such as intensive farming, horticulture, multiple crop farming, animal husbandry, bee keeping, sericulture, herbs and medicinal plant farming etc. will be promoted for the development of agricultural sector. At the same time, the genetic diversity of agricultural crops will be utilized for the development of export-oriented products. The diversification in agriculture will also assist in maintaining the ecological balance. A free, market-oriented liberal policy will be adopted in order to maintain an efficient flow and optimum utilization of resources in diverse agricultural activities.

As mentioned above, the government does not believe in excessive government control in economic activities. The private sector, in a controlled economy, can not invest independently and make decisions

concerning primary activities such as production and sale, which tends to direct the flow of investment not towards sustainable areas but towards the areas that deliver short-term gains. This leads to distortions in the economy and the economy loses dynamism causing debility in economic structure. Controlled economic policies pursued by the panchayat regime in the past have given rise to distortions in the industrial structure as they promoted industrial and commercial activities which did not enhance any significant price value at the processing stage but were only profitable in the highly protected Indian market. The non-transparent economic policies and regulations have given rise to rent-seeking behaviour causing a considerable weakening of the financial administration. Under such circumstances, while genuine entrepreneurs become discouraged, industrialists and traders, adept at exploiting non-transparent policies to their benefits, will have the upper hand. As such industrialists are more concerned with investing for short-term personal gains rather than for long-term national economy. In view of these facts, the government will abandon the past policies of excessive control and intervention, and adopt open and liberal policies.

Aware of the failure of the government sector all over the world in the production and delivery of goods through resource allocation, the government will assume the role of a catalyst and promote the private sector rather than controlling or interfering with their economic activities. Thus, limiting the scope of the government to some specific areas, the development and extension of all other areas will be left open to the private sector. The principal role of the government will be to develop physical infrastructure necessary for economic development, such as roads and communications, to bring the people so far left out into the mainstream of development, by providing basic social services such as health care, education and drinking water, essential to the long-term national development, the participation of the private sector in these areas, too, will be welcomed, the government will initiate a process of disengagement and disinvestment from a number of areas that may be managed more efficiently by the private sector without jeopardizing social interests. In accordance with this policy, government-owned enterprises and corporations will be gradually privatized. Special attention will be paid to protect private sector participation on various economic activities.

In respect of several development activities, the private sector and non-governmental organizations can evidently be more effective in terms of cost, flexibility, motivation and initiative. The non-governmental organizations which are more motivated by social service than profit and also more experienced in working in close association with rural people, are better suited to the tasks of rural development and poverty alleviation. If these organizations are allowed to play an active role in rural development, there will emerge improvements in income distribution. Considering the fact that the non-governmental organizations and community organizations have been effectively engaged in rural development over the past several years, such organizations will be involved to the maximum possible extent in development activities during the eighth plan. For this purpose the government will remove the policy obstacles and hindrances being faced by these organizations and adopt promotional policies. The following will be undertaken to this end.

Simplification and clarification of administrative processes in order to prevent private initiative from being suppressed.

Removal of unnecessary delays to accelerate the implementation of government policies, and

Further liberalization, simplification and clarification of government policies, and

Effective implementation of defined policies.

For the aforementioned purpose, plans are underway to review the license system and all other existing policies and regulations with a view to increasing the involvement of the private sector and non-governmental organizations in the economic development of the country. Laws and regulations relating to registration and the structure of non-governmental organizations will be simplified and in order to make them capable of mobilizing internal resources to a greater extent, necessary improvements will be made in the legal provisions concerning taxation. Contact and communication with non-governmental organizations will be enhanced in order to understand their problems and provide necessary support. The non-governmental organizations will be given full autonomy to function in specific priority areas. To promote the initiative of the private sector and non-governmental organizations in development works, the government will invest in transport, communications, energy, education and public health and develop infrastructure in various parts of the country. While formulating and executing the economic and social infrastructure for rural

development through these organizations, particular attention will be paid to the interest of the entire village rather than to that of an individual.

International non-governmental organizations have been playing a significant role over the past several years in the development functions in Nepal. These organizations will be encouraged to work in areas where they can operate more effectively on the basis of their expertise, comparative advantages and recognition. The selection of areas will be made as far as possible in keeping with the policy of balanced regional development.

As Nepal is a severely resource constrained country, it would not be an exaggeration to state that the development process can not be further advanced without foreign assistance. Reliance on foreign assistance without any concrete plan and without paying due attention to the optimum utilization of the assistance during the thirty years of the panchayat regime has given rise to many undesirable consequences placing the country under the burden of foreign debts. Therefore, during the eighth plan period, foreign assistance will be sought only for such priority projects which may not be sustained through internal resources and due attention will be paid to ensuring the maximum effectiveness in the utilization of the assistance. Structural adjustment loans from the World Bank and the International Monetary Fund will also be put to effective use. In this connection, the regular budget will be streamlined in respect of government expenditure, revenue will be increased through appropriate monetary and fiscal policies, the growth rate of money supply will be maintained within desirable limits and efforts will be made to increase exports through product diversification. These efforts will bring stability to national economy and encourage private sector to increase investment in productive activities.

Economic Growth Rate, Total Investment

And Sectoral Allocations

Macro economic bases of Eighth Plan

Consistency among objectives, policies, programmes and investment must be established in the course of formulating a plan. Moreover, due attention must be paid in the plan to the appropriate allocation of resources and the methods of their effective utilization. With a view to eliminating the disparity between investment plan and targets and making the plan more realistic, the plan should frame an investment programme using appropriate techniques, based on the proper assessment of all viable alternatives, Similarly, and estimate needs to be made with regard to the availability of resources as well as the growth rate likely to be achieved during the plan period on the basis of alternative sectoral plans. In the past, the plans did not pay required attention to these aspects, nor was an appropriate planning methodology used. The economic growth rate was determined in the initial stage of planning based on external variables. Therefore, the extent if requisite investment of the plan was fixed on the basis of crude incremental capital output ratios.

This methodology did not pay due attention of the need to establish coordination between various internal and external variables. This was a closed economy concept, which disregards the analysis of interrelationships among diverse economic areas. There were particularly there vita flaws in this methodology. Firstly, the fact that the availability of resources is determined by the implementation of the plan and the economic achievement to be made during the plan period was neglected. This led to arbitrary estimates of resources likely to be available in the plan period. Secondly, as this methodology fixes the investment requirement based in incremental capital output ration with total disregard to economy in sectoral allocations and better result-oriented standards, it can not be utilized in the evaluation of alternative resource allocations and in the analysis of the effects of alternative investment plan on production, employment and other variables as a whole. Thirdly, it does not help in the analysis of programmes and alternative policies, and in the assessment and formulation of these programmes and policies in the perspective of attaining total objective

The techniques of macro-model have been employed in the formulation of the Eighth Plan. This helps to assess the probable effects of alternative investment programme on the economy. According to this methodology.

The total and sectoral value added has been determined within the framework of the model and the fact that the total and sectoral investment has a decisive impact on the overall economic growth rate has been taken into consideration.

The total sectoral demands for labour are primarily determined by the growth rates of production in various sectors.

Budgetary deficit, monetary and structural variables of the economy cause monetary expansion and price determination. Budgetary deficit affects imports as well as balance of payments, which is a peculiar characteristic of a small economy like our.

Total investment is fixed by the extent of external and internal savings, and thus in turn, by the supply of investment resources too.

The sectoral incremental capital output ratios have been estimated on the basis of internal processes of the model. This will assist in the assessment of the probable effects of alternative investment programmes on medium term economic growth and short term economic stability. This will also facilitate the evaluation of the impact on the economy of the growth of economic efficiency created by the sectoral policy measures such as appropriate regional allocation of resources, selection of suitable projects and monitoring system, prudent economic management, economic openness and privatization.

The modeling technique will make it possible to assess the prevailing or the likely negative influence on the economy of low productivity, supply and structural constraints, lack of prudence in the allocation and utilization of resources and the unnecessary government interference in various economic sectors. Likewise this will also help in evaluating the probable effects on the economy from the probable growth in saving

brought about by the favourable changes in the internal and external economic environment, reduction in unproductive government expenditure and the accelerated growth of investment in industries.

Thus, there is a great need for additional reforms in spite of the various reforms proposed in this plan period. The modeling technique adopted in the Eighth plan cannot contribute much to the task of evaluating interregional relationships and the flow of regional means and resources, as it is devoted to the analysis of cumulative constraints as a whole. Therefore, the National planning commission has accorded priority to the collection of additional data and the extension of planning methodology. This will facilitate the further analysis of various aspects of interregional relations in the future.

Police Bases

In the past, there existed a vast gulf between the target and the achievements of the plans. In the absence of appropriate policy, strategy and programmes, the economy became increasingly cost oriented and the government expenditure was getting more inclined toward unproductive sectors, difficult to be sustained by the economy. The increasing government participation and interference and the lack of a favorable atmosphere for the involvement of private sector also contributed to the slow growth of the industrial sector. The major share of the private sector was attracted towards the unproductive areas such as real estate. The increased loss in the government owned corporations, the excessive expansion of the government expenditures and the excessive dependence in deficit budgeting for compensatory measures created greater impediments to the task of promoting medium and long term development programmes, gradually imparting stability to the economy at the same time. These trends continue to exist even today. Therefore, the greatest challenge now is to devise ways and means of discouraging these trends and steering the economy in the direction of more productive and sustainable economic development through appropriate policy reforms. The nation faces the complex challenges of accelerating the economic development, alleviating poverty and reducing regional imbalances and raising the living standard if the people in a short period through and extensive increase in employment opportunities against the backdrop of the scarcity of means and resources. Thus, at present there is a persistent need for extensive policy reforms and changes.

Therefore, the Eighth plan has adopted in its formulation some policy bases such as the allocation of investment in high productive areas in keeping with the priorities accorded by the plan; the attainment of performance efficiency in industry, communications, trade, hotel keeping, finance and real estate, through appropriate management of government expenditure; control of government expenses; introduction of suitable selection process and work-performance monitoring systems in the formulation and implementation of the plan; promotion of private sector involvement in the economy through economic liberalization and privatization and maintenance of proper balance and coordination among economic growth rate, availability of resources and other macro variables.

Economic Growth Rate

On the basis of an extensive evaluation of the alternative investment programmes and policies to be adopted by the plan, it is estimated that a 5.1 percent average annual growth rate will be achieved during the Eighth Plan period (table 1). This growth rate is higher than that of the last three decades. This growth rate is higher than that of the last three decades. The average long term growth rate in domestic product was merely 3 percent and this was responsible for the lack of growth in per capital income. In view of the disappointing state of the per capital income and the increase in poverty, it has become imperative to achieve higher economic growth rate for the amelioration of the standard of living of the common people. Although this growth rate would seem ambitious in the light of past experiences, it will be possible to achieve the above mentioned growth rate in the new political and economic environment. The appropriate utilization of the existing infrastructure of the economy will also contribute to the increase in the growth rate of gross domestic product. Similarly, the prospective growth in the rate of private savings and the curtailment of unproductive government spending will provide additional help in increasing the economic growth rate. Furthermore, the achievement of the above growth rate alone will ensure additional advantages to the economy and provide a sound basis for further accelerated economic growth rate and an increase in additional employment opportunities in future.

Table 1. Growth Rate of total and sectoral value added

(in millions of rupees at constant prices of 1991/92)

	1991/92		1996/97		Annual Rate
	Amount*	Share Percentage	Amount	Share Percentage	
1. Total Value Added	113,024	100.0	142,992	100.0	4.8
1.1 Agriculture, Irrigation	62,712	55.5	75,364	52.7	3.7
1.2 Non-Agriculture Sector	50,312	44.5	67,629	47.3	6.1
Industry & Mining	7,283	6.4	12,119	8.5	10.8
Electricity, Gas & Water	1,054	0.9	1,617	1.1	8.9
Construction	9,448	8.3	11,604	8.1	4.3
Trade, Hotel & Restaurant	5,995	5.3	8,548	6.0	7.7
Transport & Communications	6,878	6.1	8,548	6.0	4.4
Finance & Rel Estate	9,321	8.3	11,735	8.2	4.7
Social Services	10,372	9.2	13,270	9.3	5.0
2. Indirect Tax (net)	8,038		12,168	8.6	6.8
3. Gross Domestic Product (At market Prices)	121,062		155,160		5.1

* Owing to the one-going efforts to improve both agricultural and non-agricultural production estimates, these figures are subjects to revision, which may lead to changes in savings, investment and other components corresponding to the likely changes in macro economic variables.

The estimated growth rate of the eighth plan can not be considered unduly high in comparison with the high growth rates achieved by developing nations through economic liberalization. The appropriate allocations and utilization of resources, economic liberalization and other policy reforms will contribute further towards the attainment of the economic growth rate of 5.1 percent in the Eighth plan period.

On the assumption that the rate of population growth will be 2.1 percent during the plan period, the above economic growth rate will result in a three-fold increase over previous percapita growth rates or a three percent annual growth in per capital income.

During the plan period, the above economic growth rate will be achieved by increasing productivity, by exercising greater discipline in government expenditure, and by implementing policy reforms which will attract the private sector investment in the fields of industry, trade, finance and so on. An analysis conducted on the basis of the current extent of available foreign aid indicates that extensive improvements in work performance and considerable increase in domestic savings must be achieved in order to further increase the economic growth rate. Although foreign debts can substitute for the difference between investment and savings, they may have adverse effect on the payment of principal and interest and inflation. The above growth rate also appears to be an appropriate proposition on the basis of the capabilities of the economy and the uncertainties as to the mode of implementation of economic liberalization by the countries with whom there are regional trade relations.

In order to achieve the targeted value added growth rate in the Eighth plan period, a 5.1 percent growth rate in the gross domestic product will be achieved by means of a 3.7 percent increase in agricultural value added and a 6.1 percent increase in non-agricultural value added. The higher non-agricultural value added in comparison to the agricultural one will lead to structural changes in the economy by the final year of the plan. Structural changes in the economy by the final year of the plan. As shown in table 1, the share of non-agricultural sector will rise from 44.5 percent in 1991/92 to 47.3 percent in 1996/97. Although the growth rate which appears in the structure of domestic product will be only marginal and the agricultural sector continues to hold the major share up to the end of the plan period, these changes will certainly contribute to the creation of new employment opportunities and an accelerated growth in the non-agricultural production. The estimated economic growth rates indicate a progressive upward trend in the rate of growth in the economy.

Total investment Requirement for the plan period and sectoral Allocation of Resources:

As mentioned above, the size of total investment and its sectoral allocation patterns, growth in productivity, the control in government expenditure and the policies encouraging the diversion of private sector savings to productive sectors will contribute to the attainment of a 5.1 percent economic growth

rate. The estimated sectoral allocation of investment is based on a detailed analysis of existing and potential capital productivity in eight major sectors of economy. Compared to the seventh plan, a slight increase is proposed in the sectoral shares of investment in agriculture, irrigation, forestry, trade, hotel and restaurants and social services. There are three fundamental grounds for the proposed investment pattern. Firstly, the selection of appropriate projects and new policies of evaluation will give rise to increased efficiency in various sectors. The national planning commission will have to play a significant role in the upgrading of such efficiency. The application of new policies and methods of the selection of projects and evaluation, in particular, will result in economy in investment, and the investment units in various sectors will help the growth of production in those areas. Secondly, the policy of economic liberalization will direct the flow of resources to productive sectors such as agriculture, industry, trade and tourism. Thus, the share of industrial sector in total investment will rise to an average of 8.8 percent in the Eighth plan from the 7.7 percent average of the seventh plan. Similarly, the share of agriculture, irrigation and forestry will increase to 25.8 percent for 24.5 and this increase will have been made possible mainly by the development programmes related to rural development. Thirdly, as the Eighth Plan lays special emphasis on rural development, there will be a considerable increase in people's participation and the contribution of labour. Therefore, in spite of the lack of larger financial investment, there will be a higher generation of capital in these sectors.

Table 2. Total and sectoral Fixed capital Investment in the Eighth plan (At constant prices of 1991/92)

(in millions of Rupees)

Sector	Seventh Plan		Eight Plan		Incremental* Capital Output Ratio	
	Amount	Share%	Amount	Share%	Historical	Projected
Total Gross Fixed investment	103,014	100.0	170,332	100.0		
Aggregate Incremental Capital Output Ratio					4.5	4.3
Agriculture, Irrigation and Forestry	25,270	24.5	43,876	25.0		
Industry and Mining	7,572	7.4	14,925	8.8		
Electricity, Gas & Water	17,246	16.7	27,668	16.2		
Construction	3,382	3.3	5,072	3.0		
Trade, Hotel and Restaurants	2,678	2.6	6,581	3.8		
transport and Communications	15,881	15.4	26,119	15.3		
Finance and Real Estate	23,970	23.3	33,184	19.5		
Social Service	7,015	6.8	12,907	7.6		

* Owing to the time lag between investment & production and the regression technique adopted to estimate both actual and projected incremental capital output ratios, the ratios quoted in this table will not be equal to those estimated on the basis of proposed national income change and total investment made during the period.

The total gross investment outlay for the eighth Plan period is estimated to be Rs. 170,332 million (Table 2). This estimate is based on the assumption that there will be an improvement over the past incremental capital output ratio of 4.5:1 to 4.3:1. The incremental capital output ratio is estimated to be as decline because of the projected better results of expenditures in governmental sectors to be made possible by the policy of economic liberalization in the private sector, and appropriate selection of projects, budget, expenditure, management and monitoring systems.

As shown in Table 2, the share of agriculture, irrigation and forestry in total investment will reach 25.8 percent. Similarly, compared to the seventh Plan, the investment share of industry, trade, hotel and restaurants and social services will also increase in the eight plan. The proposed size of total investment and its sectoral allocation patterns will primarily contribute to the increase in the aggregate and sectoral production growth rates. Similarly, the growth of efficiency in some sectors, too, will cause a marginal decline in the incremental capital output ratio.

Out of the total gross fixed investment of Rs. 170,332 million, Rs. 109,193 million (64.1 Percent) will be invested by the private sector while the remaining Rs. 61,139 million (55.9 Percent) will be invested by

the government sector (table3). In the seventh plan the amount of total investment stood at Rs. 103, 014 million at 1991/92 prices. Thus, compared to the seventh plan, investment during the eighth plan period will have to be increased by 10.6 percent per annum. Although this rate appears to be fairly high compared to that of other least developed nations, considering that the Eighth plan has been initiated at a time when there in a limited capital base, it will be possible to increase the investment at the above mentioned rate. The new environment created by liberal economic policies will also promote the increase of the investment growth rate. In the seventh plan, the share of government sector stood at 41 percent of gross fixed investment, which will come down to 35.9 percent in the Eighth plan. It is expected that the adoption of liberal economic policies will increase the growth rate of investment from the private sector. Thus, the share of the private sector investment is estimated to reach 64.1 of gross fixed investment during the Eighth plan period.

Table 3. Private and government gross Fixed investment by sector During the eighth plan

(At 1991/92 constant prices)

(in millions of Rupees)

	Private Sector*		Government Sector		Total	
	Amount	Share%	Amount	Share%	Amount	Share%
Agriculture, Irrigation & Forestry	25,512	25.2	16,364	26.8	43,876	25.8
Industry and Mining	13,689	12.5	1,236	2.0	14,925	8.8
Electricity, Gas & Water	8,631	7.9	19,037	31.1	27,668	16.2
Construction	5,072	4.7	-	-	5,072	3.0
Trade, Hotel and Restaurant	6,009	5.5	527	0.9	6,581	3.8
Transport & Communications	11,281	10.3	14,838	24.3	26,119	15.5
Finance and Real Estate	33,184	30.4	-	-	33,184	19.5
Social Services	3,815	3.5	9,092	14.9	12,907	100.0

* Private sector includes public enterprises, too. The present national accounts system does not permit separation of public enterprises from private sector.

Although a total investment of Rs. 61,139 million is proposed for the public sector, it will be necessary to spend development outlay equivalent to Rs. 113,479 million during the Eighth Plan period. As shown in Table 4, of the total development outlay of 113,479 million, social services and agriculture, irrigation and forestry sectors will receive a higher share of the total development outlay (31.5 and 25.7 percent respectively) followed by electricity (20.9 percent) and transport and communications (17.7 percent). A detailed sectoral breakdown of the total development outlay is presented in table 5. the differences in the shares of sectoral gross fixed investment in total development outlay are caused by the differences in the nature of the programmes proposed in various sectors.

Table 4. sectoral Allocation of Total development outlay**(At 1991/92 constant prices)**

(in millions of rupees)

	Seventh Plan		Eight Plan	
	Amount	Share%	Amount	Share%
Agriculture, Irrigation & Forestry	20,045	27.0	29,193	25.7
Industry & Mining	4,539	6.1	2,245	2.0
Electricity	12,751	17.2	23,719	20.9
Trade and Tourism	422	0.6	1,481	1.3
Transport & communications	11,657	15.7	20,030	17.7
Social Services	21,894	29.5	35,808	31.5
Miscellaneous	2,866	3.9	1,003	0.9
Total	74,174	100.0	113,479	100.0

Table 5. Detailed Sectoral Allocation of Development Outlay**(At 1991/92 Constant Prices)**

(in millions of Rupees)

Head	Amount	Share %
1. General Administration	170	0.15
2. Economic Administration & Planning	133	0.12
Planning	56	0.05
Statistics	77	0.07
3. Social Service	35,808	31.56
Education & Culture	17,290	15.24
Health	5,466	4.53
Local Development	4,010	3.53
Housing & Drinking Water	8,577	7.56
Housing	2,304	2.03
Drinking	6,273	5.53
Other social Services	465	0.41
4. Economic Services	77,368	68.17
Agriculture	10,947	9.65
Water Resources	35,802	31.54
Irrigation	11,966	10.54
Electricity	23,719	20.90
Hydrology & Meteorology	117	0.10
Land Reforms & Survey	791	0.70
Land reform	291	0.26
Survey	500	0.44
Forestry & Environment	5,372	4.73
Industry	2,245	1.98
Transport & Communications	20,030	17.65
Communications	3,835	3.38
Transport	13,564	11.95
Civil Aviation	2,631	2.32
Other Economic Services	2,181	1.92
Commerce	278	0.24
Labour	115	0.10
Tourism	1,088	0.96
Miscellaneous	700	0.62
Total	113,479	100.0

Sources of Investment

Out of the total fixed capital investment of Rs. 170,323 million, 56.3 percent (Rs. 95,977 million) will be borne through national savings. Of the remaining 43.7 percent (Rs.74,355 million) 26.6 percent (Rs. 19,761 million) will be financed through foreign grants and 73.4 percent (Rs. 54,594 million) through external loans.

From the table, it clearly appears that ins spite of high priority accorded to private sector investment, the private sector's savings in likely to exceed its investment amount. However, despite the reduced investment, there may be considerable negative savings accumulation in the public sector. The expansion of the public sector and the uncontrolled inclusion of numerous projects during the panchayat regime have led to the continuity of an expenditure burden in the initial years of the eighth plan entailing a continued increase in government expenditure and negative savings. The almost unsustainable upward trend in negative savings appears to have gained impetus during the last decade of the panchayat regime and the main contributing factor for this is a great increase in the unproductive and consumption expenditure of the public sector.

Table 6. Gross Fixed Capital Investment and the sources of Financing

(At 1991/92 Constant Prices)

(in millions of rupees)

	Amount	Share %
Private Sector		
Gross fixed investment	109,192	100.0
Savings	117,105	107.20
Surplus	7,912	7.20
Government Sector		
Gross fixed investment*	61,139	100.0
Savings	(21,128)	(34.50)
Foreign Aid	74,355	121.60
Deficit	(7,912)	(12.90)
Internal loan	7,912	12.9
Total		
Gross fixed investment	170,332	100.0
National savings	95,977	56.30
Foreign Aid	74,355	43.70
Grant	19,761	11.60
Loan	54,594	32.10

* Gross fixed capital investment in the public sector is assumed to be 53.9 percent of total development outlay.

Although the size of negative savings is expected to reduce towards the end of the plan upon gradual improvements over the budgeting and accounting systems used in regular and development budgets, it will take a number of years to make the public sector capable of generating savings. As shown in table6, the negative savings during the Eighth plan will be, more or less, equivalent to 34.5 percent of the gross fixed capital investment of the public sector. At the economic growth rate of 5.1 percent, the government revenue will increase by 9.7 percent, but the share of negative savings will continue to be high due to its increasing trend in the past. The deficit between the public sector negative savings and investment will be borne through foreign assistance and internal borrowing. Internal loans will primarily be arranged from private sector saving, which will facilitate the control of money supply and price level.

A little different picture emerges when the level of development outlay and sources of financing are analyzed. As shown in table 7, during the Eighth plan, the share of revenue surplus in development outlay will remain 27.5 percent and the share of foreign aid will be maintained at 65.5 percent. Only 7.5 percent will be borne through internal borrowing. Thus the extent of deficit financing will be much lower in this plan than in the previous plans.

Table 7. Total Development outlay and Sources of Financing**(At 1991/92 constant Prices)**

(in millions of rupees)

	Amount	Share %
Revenue	84,971	
Regular Expenditure	53,759	
Development Expenditure	113,479	100.0
Revenue Surplus	31,212	27.5
Foreign Aid	74,355	65.5
Grant	19,761	17.4
Loan	54,594	48.1
Deficit Finance	7,912	7.0
(internal loan)	(7,912)	(7.0)

Macroeconomic Impact of total and Sectoral Investment

The reallocation in sectoral investment and economy in resource utilization, accompanied by liberal economic policies, will not only help achieve higher growth rates but also increase employment opportunities and maintain economic stability during the plan Period. Besides, the creation of a favorable environment for private sector will also stimulate growth in domestic savings. As shown in table 8, gross domestic savings will rise from 9.5% of the gross domestic product in 1991/92 to 12.5 percent of gross domestic product by the end of the plan period in 1996/97. the deficit finance will be reduced from 1.7 percent of the gross domestic product in 1991/92 to less than one percent of GDP by the end of the Eight plan. Similarly, the current account deficit will also be reduced from 9.6 percent of gross domestic product in 1991/92 to 8.0 percent in 1996/97.

Table -8
Major Macroeconomic Indicators
(at 1991/92 Onstant Prices)

In millions of rupees)

	1991/92	1996/97	Growth Rate%
Gross Domestic Product	121.062	155.160	5.1
Total Domestic Savings	11.449	19.328	11.0
National Savings	14,267	23,253	10.3
Government Revenue	12,995	20,685	9.7
Government Expenditure	24,385	39,405	10.1
Budgetary Deficit	2,058	1,396	7.5
Import of Goods & Services	36,219	60,525	10.8
Export of Goods & Services	21,757	44,231	15.2
Current Account Balance	-11,644	-12,369	1.2
Employment (in thousands)	8,707	10,156	3.1
Government Sector Consumption	13,941	19,553	7.0
Private Sector Consumption	95,672	116,279	12.1
Money Supply	19,938	35,254	12.1
Consumer Price Index	100	154.1	9.0
Share in Gross Domestic Product (in Percentage)			
Domestic Savings	9.5	12.5	
National Savings	11.8	15.0	
Government Revenue	10.8	13.3	
Government Expenditure	20.1	25.4	

Budgetary deficit	1.7	0.9	
Import of Goods & Services	29.9	39.0	
Export of Goods & Balance	17.8	28.5	
Current Account Balance	9.6	8.0	
Government Sector Consumption	11.5	12.6	
Private sector Consumption	79.0	74.9	

The share of government consumption is expected to increase only moderately from 11.5 percent of the gross domestic product in 1991/92 to 12.6 percent of the gross domestic product in 1996/97. The increase in money supply during the plan period will be limited to 12.1 percent per annum, which will help in limiting inflation to about 9 percent. The policy and structural reforms to be adopted during the plan period do not permit any great reduction in the average rate of inflation. However, since these reforms will help achieve stability in the economy, they will facilitate the task of reducing the rate of inflation in the years to come. During the eighth plan period, the rate of inflation will be maintained below 9 percent in average by reducing the increasing liquidity of the economy and by adopting other appropriate monetary and fiscal policy measures.

Manpower demand during the plan period will record a growth at the rate of 3.1 percent per annum. This increase in manpower demand is expected to take place as a result of the increase in investment in different sectors of the economy and the subsequent rise in value added. The increased demand in the labour force during the eighth plan period is expected to reach over 1.4 million jobs. Thus, the macroeconomic implications of total and sectoral investment outlay indicate that, provided the proposed policies and programmes are effectively implemented in time, they will be able to contribute in constantly raising the economic growth rate, maintaining economic stability and alleviating poverty through the extension of employment opportunities.

Table 9. Total and sectoral labour force Demand

(in thousands)

Sectors	1991/92		1996/97		Growth rate percentage
	Labour Demand	Share Percentage	Labour Demand	Share Percentage	
Agriculture, Irrigation & Forestry	7,331	84.20	8,192	80.70	2.20
Industry and Mining	214	2.40	395	3.90	13.00
Electricity, Gas & Water	6	0.10	8	0.10	5.90
Construction	104	1.20	139	1.40	6.00
Trade, Hotel & Restaurants	180	2.10	248	2.40	6.60
Transport & Communications	181	2.10	250	2.40	6.60
Finance & Real Estate	22	0.20	32	0.30	7.80
Social Services	669	7.70	892	8.80	5.90
Total Labour Demand	8,707	100.0	10,156	100.00	3.10

In the past, the Nepalese economy remained considerably weak in matters of achieving higher economic growth rate and maintaining stability. The declining productivity in the government sectors, the reduction in the share of domestic savings in gross domestic product and the flow of a major share of total private sector investment towards unproductive capital sector such as real estate also have created several problems in the economy. Estate also has created several problems in the economy. Therefore, in order to raise the productivity of the government sector, special emphasis will have to be given on the method of selecting appropriate projects, appropriate pricing policy, reformative institutionalized systems of monitoring and evaluation and the privatization of government undertakings. It is necessary to promote productive investment policies which encourage the private sector to save and to direct their investment from the unproductive sector like real estate to the sectors capable of achieving higher economic growth rate such as industry. The emphasis on efficient and economic-growth oriented sectors and the subsequent desirable structural changes in the eighth plan will provide considerable advantages to the economy during and even after the eighth plan period. As the returns from investment take long time to materialize, the policy reforms and the structural changes in the eighth plan are confidently expected to increase the work-performance of the economy particularly in the later years of the plan and thereafter.

Estimates of Development Materials

Following is the estimated requirement of construction and development materials during the plan period for development programmes to be implemented during the Eighth plan.

Cement:

It is estimated that in order to undertake of iron rode, sections, channels, corrugated and ordinary roofing sheets in expected to be 669,000 metric tons during the Eighth plan period. Although the total installed capacity of the industries producing these materials is 229, 000 metric tons per annum, they are found to be operating at only 25 percent of their installed capacity.

Bricks:

An estimated requirement of 8,800 million bricks for the eighth plan is expected to be met by the production of the industries in the public as well as private sectors.

Timber:

Timer is used in industries, construction work and for fuel wood. It is estimated that government agencies will be able to supply a total of 15,850 million cubic feet of timber of different types during the plan period.

Polythene pipes:

In view if the policy of expanding drinking water facilities, there will be an increase in the use of polythene pipes in the plan period. Accordingly, 17,000 metric tons of polythene pipes are estimated to be put into use during this plan period.

Chemical Fertilizers:

The requirement of chemical fertilizers for the Eighth plan is estimated to be 916,000 metric tons the total requirement of chemical fertilizers in the country is being met through import.

Mineral oils:

The items under mineral oils are petrol, diesel, kerosene oil, aviation fuel, light diesel oil, furnace oil, L.P. gas, and bitumen etc. A total of 1,993,000 kilo liters of petroleum products in estimated to be required during the Eighth plan period. The entire requirement of these products will have to be met through import. A project has been initiated in view of the natural gas deposits found at different places in the Kathmandu valley.

Coke and Coal:

The estimated consumption of coke and coal for the eighth plan is 1,113,000 metric tons, which is expected to be met through import.

Writing and printing paper:

The consumption of writing and printing paper during the eighth plan is estimated to be 121,000 metric tons. out of this requirement, 21 percent only is expected to be met through the production of Bhrikuti paper factory and Everest paper mills.

News print: During the Eighth plan period, the demand for newsprint in estimated to be 18,000 metric tons the entire demand is expected to be met through import.

Explosives:

The estimated demand for explosives during the eighth plan period is 1,400 metric tons. The requirement is expected to be met even through the production of the factory of the Royal Nepalese Army.

Objectives and priorities of the Eighth Plan

Objectives

The broad objective of the eighth plan is to give definite direction to the social and economic upliftment of the citizens of the country by tackling the challenges of economic stagnation, increasing poverty, structural anomalies, environmental degradation and rapid population growth. A single five year plan can not find a remedy to all these problems but it is imperative to take concrete steps in that direction. The plan will make all possible efforts in this regard.

The principal objectives that the plan aspires to achieve are as following:

Sustainable economic growth

Poverty alleviation, and

Reduction of regional imbalances

a. Sustainable Economic Growth

One of the principal objectives of the plan is to achieve a high and sustainable rate of economic growth without which there is no possibility of achieving economic prosperity and its continuity. The economy will not be able to fulfill the developmental aspirations of the common people without a sustainable and high economic growth rate. The eighth plan is determined to achieve a high growth rate and ensure its continuity objective of achieving a high & sustainable growth rate in the development efforts of the country.

Sustainable economic growth also implies the management of the available bio-physical resources in the most productive manner without damaging or depleting these resources. The demand for such bio-physical resources should not exceed their sustainable supply capacity. However, the present population of the country is already placing excessive demands on existing resources. If the present trend of population growth is allowed to continue, it will not be possible to meet the demands of the people without causing permanent damage to the bio-physical resources. Therefore, it is highly essential to reduce the rate of population growth in order to achieve a sustainable economic growth rate.

To achieve the above mentioned objective, this plan has called for the involvement of private sector and increased people's participation at the community level. This objective and the concept of equity are complementary to each other. The plan has made additional efforts to increase the productivity of the productivity of the labour force and to make the financial investment more productive. Similarly, programmes with higher comparative advantages will be implemented in agriculture, industry, tourism and other sectors. Comparative advantages can be achieved by the utilization of low cost hydro-electricity and other natural resources in the production process. This will produce a comparative advantages especially in energy-oriented industries and irrigated cultivable land. For this purpose, the advanced technology and institutional reforms will be made indispensable tools of support to the private sector and organizations down to the village level and production will be increased on the basis of equity and capability.

b. Poverty alleviation

Despite the development efforts of the past, the population living below the poverty line has been steadily increasing and the majority of such poverty ridden people live in the rural areas. The biggest challenge for the present government is to alleviate poverty from the rural sector. It is the root cause of many of the existing problems of Nepal such as population growth, environmental degradation and social anomalies. Therefore, another principal objective of this plan is to alleviate poverty.

Although poverty is the result of diverse factors, the basic causes of poverty in Nepal are the dependence of the increasing population on limited economic resources and low rate of economic growth. The visible impediments to economic growth such as natural constraints, preliminary stage of development efforts, low productivity, subsistence agricultural system and slackness in the expansion of non-agricultural sector are the major factors for a weak economic base. In this perspective, emphasis is given on formulating integrated and inter-regional programmes that primarily focus on the creation of productive, emphasis is given on formulating integrated and inter-regional programmes that primarily focus on the creation of productive assets base and additional employment opportunities to alleviate poverty, extension of social services like health education, vocational training and drinking water, and effective management and protection of natural resources. As part of the planning and implementation processes programmes will be implemented with the objective of benefiting the population living below the poverty line.

c. Reduction of Regional Imbalances

in Nepal, poverty has acquired spatial variations. Despite policy-pronouncements and efforts in the previous plans, disparities between rural and urban areas, and among development regions have increased. Over the recent years, there has been an increased trend of migration from rural to urban areas. Hills to terai migration continues. If the disparity in urban and rural income is not reduced, this trend may gain greater momentum. Similarly, in comparison with other development regions, far western region and mid western region lag far behind in respect of infrastructural and social service facilities and other development works. The living standard of the people of these regions have adversely affected by the growing disparity of income distribution caused by these factors. This has further complicated the creation of equal opportunities for sharing development benefits. In this context, maintenance of regional balance forms another objective of the Eighth plan. While allocating resources in order to achieve regional balance, due attention has been paid to the necessity of creating physical infrastructure in these less developed regions. With this objective, while special emphasis has been given on the extension of rural roads, due importance has been attached to the provision of facilities like primary health care, education and drinking water in rural sector. The regional complementary interrelationships between the hills and the Terai arising out of the existing agro-ecological conditional can be beneficially utilized for agricultural and industrial specialization. Therefore, the current and future development perspectives will be accorded special emphasis in order to benefit from the ecological interrelationships between the Hills and Terai. Focusing on the development of less development regions, special emphasis will be laid on the reduction of regional imbalances.

In order to achieve the principal objectives mentioned above, it has become essential to improve economic standard of rural people to achieve self-sustaining rural development through the increased provision of social, economic and market services, and increased access to drinking water and alternative forms of energy.

Priorities

In view of the limited financial, human and institutional resources of the country, it will not be possible to provide adequate resources to all activities within a single plan period. This plan will in the course of resource allocation, accord priority to such programmes whose completion provides necessary support to another or those which have a high economic benefit. The programmes receiving priority in this plan are:

(a) Agricultural Intensification and Diversification:

It is being increasingly realized that the contribution of agriculture to the overall economic development of the nation is not only determined by the growth rate of agriculture but also by its pattern. Development strategies which broaden the base of agricultural development also promote accelerated growth in other areas. In a development system that encompasses the majority of the population, a greater number of producers including the marginal ones can have access to the increased rural income. The demands of such producers are usually related to the goods and services which use maximum local resources and labour. For the attainment of equitable economic development, it is necessary to accelerate demands for labour and to expedite food supply.

The agricultural sector alone contributes about three fifths of the gross national product and provides employment to nearly eight tenths of the entire population. Agriculture is that sector which will be able to involve, although only for a short or medium period, the rapidly increasing labour force in productive activities. As there are severe limitations on expanding the cultivable land, this plan has accorded priority to agricultural intensification and diversification.

With adequate provisions of necessary agricultural support services, intensive farming will be introduced in areas with access to irrigation facilities. In such areas, the emphasis will mainly be laid on cereal production. Depending upon the suitability of climatic conditions and access to services, agricultural diversification in cash-crops, horticulture, vegetable farming and livestock will be emphasized. In order to meet the urban demand for milk, eggs, fish, meat, fruits and vegetables, priority will be given to intensive production programmes in areas adjacent to the cities and along road corridors to urban areas. Sericulture, bee keeping medicinal herb farming and similar significant but low-cost small-scale activities will be encouraged to increase the income of the farmers in the hills and the mountains.

(b) Energy Development

Energy plays an important role in the economy, in respect of both domestic and exports sectors of the economy. Although the country is well endowed with abundant biomass and hydropower resources, the pace of industrialization is felt to have slowed down in the recent year mainly because of the lack of energy and power. While it implies that rapid industrial growth is not possible without tackling the energy constraints, the growth of agricultural production may be impeded by the lack of energy for life-irrigation and processing of agricultural products. If an elementary machinery like water mill, diesel engine and bio-gas plants could be developed in the rural areas, it will contribute immensely to the development of food processing industries and cottage industries.

Nepal's vast potential to generate comparatively cheap hydropower provides comparative advantages in many energy through modern technology and its integration with the development of other sectors of the economy can enhance sectoral productivity as well as comparative advantages. For instance, it will be possible to transfer the traditional agricultural pattern to modern agricultural system through the use of electricity in lift irrigation, making use of technology and fertilizers. This will lead to a considerable increase in agricultural productivity as well as a decrease in foreign currency expenditure for the import of diesel.

All these considerations clearly indicate that energy development should be accorded high priority in Nepal's development planning.

c. Development of Rural Infrastructure

In order to support industrial growth, the market for industrial production will be expanded in rural areas by providing roads and other forms of transportation linking rural communities and market centres. Market facilities will be intensively improved in order to aid the convenient supply of necessary agricultural inputs as well as the sale and purchase of surplus agricultural produce. Necessary infrastructure will be built for the development of rural irrigation, drinking water, electricity, communications, rural industries and tourism etc. providing the basic facilities of life such as suspension bridges, schools and health care, the environment in the villages will be made comfortably in the rural areas. The rural development infrastructure will provide employment opportunities to the growing labour force of the rural sector. Therefore, this plan has accorded high priority to the creation of the entire infrastructure if rural development.

d. Employment Generation and Human Resource Development

The creation of productive employment opportunities in the country has been given top priority by this plan. In order to create employment opportunities at an accelerated rate, all possible avenues have been explored in the sectoral programmes. Since nearly 90 percent of the population live in rural areas, the plan has laid special emphasis on generating greater employment opportunities in rural areas. Thus, the plan has emphasized on bigger investment in rural areas for the development of non-agricultural activities such as development and renovation of infrastructure, expansion of agriculture through the use of electricity and cottage industries based on local energy resources.

This plan has made arrangements of adequate resources of further productive involvement of the existing human resources in the efforts of national development. Since the existing labour force is largely illiterate and unskilled, basic education and technical and vocational training opportunities will be expanded with particular emphasis on rural areas.

e. Control of Population Growth

The available resources in the country cannot forever sustain the current rate of population growth. The rapid increase in population leaves only an insignificant portion of resources for development works. There can be no prospect for a substantial increase in the average income of the people if the population is allowed to grow at the present rate. Therefore, the reduction in the rate of population growth is one of the priority areas of this plan.

The family planning devices are still not readily available in various parts of the country. It has been proved that family planning devices are being used only in areas with the spread of literacy among women and with easy access to primary health facilities, and in families with high standard of living. Therefore, this plan has placed special emphasis on the awareness creation programmes to increase in the demand for family planning devices.

f. Industrial Development and Tourism Promotion

Economic prosperity depends upon a rapid sustainable economic development. For the attainment of accelerated economic development in the country, industrialization is equally as important as that of agriculture and other primary sectors. The industrialization, in the process of value added contributes, to

the creation of new employment opportunities and economic integration. The eighth plan policies have been so formulated that they will promote the sustainable growth of large as well as cottage industries. During this plan period, an atmosphere favourable to the open and competitive growth of industries will be created and expanded. The private sector as well as foreign investors will be particularly encouraged through appropriate policy measures to invest in the industrial sector. Similarly, tourism sector will be promoted in order to generate increased foreign exchange, employment and income. Because of the gifts of nature, it is in tourism that Nepal can gain comparative advantages. However, owing to the constraints in the supply of necessary commodities and insufficient and incompatible initiatives, tourism has so far been a seasonal phenomenon and has not been able to make the desired headway. In order to make use of all feasible development prospects, the eighth plan has accorded special priority to the overall development of this sector. The government will invest in the creation of infrastructure of industry and tourism, and provide support to the private sector. Policies will be continued to be effectively implemented so as to induce the domestic and foreign investors to increase their investment with confidence and to generate higher returns as cooperated to the rate of investment. In this connection, some pioneering steps have already been taken with regard to policy matter.

g. Export promotion and Diversification

The rapid widening of trade and current account deficits in recent years has become a matter of serious concern to the country. The complications in the export of traditional and some new kinds of manufactured goods and the quantitative decline in the agricultural products have contributed to the narrowing of the agricultural products have contributed to the narrowing of the export base of Nepal. The market available to Nepalese exporters is limited. These factors have impeded the attainment of stability in the growth of export. Although the carpet and garment industries have recorded a significant growth in export earnings over the recent years, in view of quality control, proper organizational structure, large scale production and innovations in the production patterns, it is necessary to improve the quality standards of the products for markets to which they have been usually exported. New products have not been successfully identified as yet for export promotion programmes. The growth of the export sector has been restricted due to the lack of clear-cut export policies and low priority accorded to it in the past. The eighth plan has given priority to the production and promotion of both traditional agricultural commodities and new exportable products. This plan has adopted the strategy of promoting market oriented production which will contribute to the development of production as well as market facilities.

h. Macro-Economic Stabilization

The expansionary policy adopted in the past has given rise to excessive liquidity, increasing money supply, increasing trade imbalance and high price rise. This has weakened the stability of the economy. Under the given circumstances, the policies of macro economic stabilization and structural adjustments can play a significant role in the attainment of the objective of stability in economic growth rate. In this connection, the plan has given special emphasis to a more rational allocation of resources, better management of public expenditures, enhanced mobilization of internal resources, greater performance in public sector investment and the strengthening of public enterprises, open and simple foreign exchange policies and regulations, and prudent fiscal and monetary policies. Due emphasis has been given on the reinforcement of the present financial system in order to further mobilize savings in the private sector. Encouragement has been provided to the establishment of new financial institutions and the development of capital markets. Exploration of new methods of saving has been encouraged by removing the control of the central bank on the fixation of interest rates.

i. Reforms in Development Administration

The increasing proportion of administrative cost in development investment and slow decision making processes have led to delays in the projects implementation. As the employees in public sectors consume, even at the existing low salary scales, a major share of the government revenue only a meager portion of it is available for capital investment. The lack of a suitable working atmosphere, the gradual decline in the morale of civil servants and the lack of the sense of responsibility can be cited as examples of additional constraints. There is a great need for reforms in the existing system of recruitment, posting, training and promotion. During this plan period, reforms through appropriate measures will be introduced in order to make the development administration capable enough to meet the challenges of national development.

j. Monitoring and Evaluation

While the planned projects are not usually implemented on time, the projects subsequent to their implementation, too, have failed to produce the desired result. This has led to a disparity between planning and implementation, and between implementation and achievements, which have been a matter

of great concern to the government as well as donor countries. In such grave circumstances, the government has fully understood the need for institutionalization of the monitoring and evaluation systems with respect to development projects and programmes. During the plan period, an effective monitoring and evaluation system will be devised and institutionalized, which will not only ensure the timely implementation of projects but also encourage management accountability and performance oriented evaluation system in the public sector.

Part –III
Sectoral Policies and Programmes

Agriculture, Forestry and land reforms

Background

The agriculture and forestry sector which has been the foundation of Nepal's economy, can contribute significantly in raising the standard of living of the Nepalese people. Therefore, this sector can play a significant role in the achievement of the objectives of the Eighth plan (sustainable economic growth, poverty alleviation, and reduction of the regional imbalances). The majorities of the Nepalese families are engaged in farming and live in the rural areas. The decision taken by millions of farming families will determine how the natural resources are used for this sector. As long as the utilization of these natural resources is not reconciled with the natural regeneration process, the sustainability of such resources cannot be ensured.

The topography of Nepal is such that, on the one hand, it has posed some constraints like diversity, remoteness, marginality fragility and other mountain features and, on the other hand, agro-climatic zones offer opportunities of comparative advantages on the production of diverse agro-forestry products. Our farmers having adapted themselves to the local environment have learnt to face these constraints in their own traditional ways and are thus experienced in the use of existing local resources; what is needed is the effort to achieve sustainability by reducing the pressure of the increasing population and amalgamating the modern technology with existing resource utilization patterns.

The hilly, steep and fragile topography has made the use of soil, water and vegetation a sensitive issue and the diverse ethnic communities living in various geographical sub-regions have their own values, norms, attitudes and experiences. Therefore, the situation clearly demands that the development efforts must take these sensitivities and experiences into full consideration in designing any development programme in the country.

The Seventh Plan's Achievements

A review of the achievements during the seventh plan reveals that while the intention of the plan was to achieve most of the objectives through an increase in productivity, in reality the production increase³ was largely due to the expansion of area rather than the growth in productivity. The unexpected increase recorded in agricultural production during the plan period stems mainly from unreliable statistics as the expansion in land area which occurred in the past was actually recorded only in recent years. Thus, the annual growth rate of agricultural sector (5.7 percent) and that of major agricultural crops (6.8 percent) are both higher than the targeted rates. Similarly, the objective of reducing the dependency on agriculture by increasing the non-agricultural sector's contribution to the economy was not achieved.

Plans were made to implement programmes in production areas by classifying them into special, pocket, and general programme areas, but the implementation of these programmes was not effective. While the targeted reforms in the organizational structure of agricultural research could not be achieved, some efforts were made in focusing research on hill crops, and in implementing special production programmes in fruits, vegetables, fishery and livestock in areas with good transport facilities. But, the programmes such as developing model villages based on livestock farming, extending breeder farms, encouraging farmers towards greater milk production through increased milk collection and intensifying fruit cultivation in the form of fruit orchards do not seem to have progressed effectively. It is evidently noticed that sufficient efforts were not made in the area of agricultural prices and market development. The agricultural extension programme lacked uniformity and was thus ineffective reaching farmers. The supply of chemical fertilizers and improved seeds was also not effective.

On the agricultural credit front, the targeted objectives in respect of loan disbursement and realization were not achieved in spite of the abundance of funds received through foreign loan assistance. Although the commercial banks had the policy of investing 12 percent of their deposits in priority sectors like agriculture, they were not able to invest the available funds of about Rs. 1,500 million.

Significant improvements in productivity were not achieved due to ineffectiveness of programmes like soil quality improvement, inspection and testing of the quality of improved seeds produced locally, and the lack of proper control of erosion of fertile soil and fertilizer supply management. Similarly, agro-based industries seemed to have failed to provide remunerative price and assured market to agricultural crops except for sugarcane by lining production with processing. In irrigation sector, the target was to develop irrigation facilities in additional 244,000 hectares of land but area irrigated was only 179,000 hectares. As agricultural programmes were not implemented effectively even in existing irrigated land, desired progress in productivity, increase was not achieved.

The land reform programme had adopted as policy objective the protection of tenancy rights and incentives in increasing agricultural production, the provision of loans against the collateral of tenancy certificates, studies on abolishing dual ownership of land, encouragement to contract and lease farming, control of fragmentation of land and so on. However, no achievements were made in making necessary legal provisions in this regard except for the routine investigation and settlement of tenancy disputes.

The present review thus demonstrates that the agricultural development efforts are still best with contradictions relating to the mobilization of productive resources and productivity increase major factors responsible for this situation include insignificant improvement in productivity, inadequate supply of production inputs and services, the lack of assured price and marketing opportunities, and absence of legal provision for land-reform.

In forestry the plan aimed to undertake forestry development programmes in degraded forest areas on a priority basis to meet the day to day needs of the people for forestry products such as fodder, firewood and timber. There were plans to control the deteriorating ecological balance through afforestation and watershed management programmes and to generate economic benefits through the export of processed and semi-processed medicinal herbs and other product. But, with tree plantation having been accomplished in only 99,173 hectares, not even 60 percent of the targeted achievement was not made, nor does there seem to have been any satisfactory progress achieved in the management and conservation of existing forests. Similarly, no satisfactory achievement was made in land conservation programmes such as the rehabilitation of terraces and the control of gulleys. The extension of medicinal herb farming exceeded the target but the progress on processing of herbs was below the target.

The forestry research programmes have not been very effective in developing suitable technology for achieving stability in the forestry sector's contributions in meeting the needs of farm community and in generation income and employment opportunities. The forestry development programme, on the other hand, was not directed towards maintaining effective balance between the demand and supply of forestry products and promoting income and employment generating activities for farmers. Towards the end of the plan, however, a master plan was formulated on the basis of the analysis of the challenges faced by the forestry sector.

In land use, the analyses of the changes in land utilization patterns do not seem to have been available. The Nepal remote sensing centre, an important infrastructure of this sector, as also not utilized effectively. A study report was, however, prepared on the classification of land.

Major Existing problems and Anomalies

In the past, development plans were no doubt formulated and implemented as well. However, in respect of the utilization of agricultural and forestry resources for the fulfillment of our growing needs and aspirations, those plans could neither expand the resources nor provide sustainability. The constraints and opportunities of the hilly region were duly identified in the course of formulation the plans, but the plans lacked the necessary perspective to move forward by identifying the interrelationships and coordination among them. The production processes and technologies if agriculture were not suited to the mountain specific features. The use of the technologies, borrowed from the irrigated plains, could not meet the unique needs of the hilly region. Proper attention was also not paid to the probable impact of the change in hilly region on the plains. Indigenous knowledge and values were not preserved. The projections of production inputs necessary for production increases were not pragmatic. Nor were the targeted quantities pragmatic. Nor were the targeted quantities of inputs supplied and distributed in time. Emphasis was given on grants, but the grants instead of working as seed capital took the form of annual demands causing adverse effects on economic stability. The maximum utilization of existing infrastructure was not emphasized, but available limited resources were scattered far and wide.

The forestry sector was out to unrestricted use in the Terai as a source of income, but no concomitant arrangement for regeneration was made. No systematic order was introduced in the obligatory utilization processes necessitated by the farming system of the hills. The implementation of land reform programme, could neither safeguard the interest of tenants nor abolish the dual ownership of land. There appeared a gap in the mutual trust between the land owners and tillers. The forestry sector, in keeping with its tradition, turned into a haven for the families displaced as a result of the social and economic distortions caused by the above mentioned anomalies and thus continued the process of destruction of forests. Soil erosion, floods and sedimentation occurred at different places. Access to fodder and bedding materials decreased population increase, infertile arable land and depleting organic manures had a negative impact on agriculture production. There arose a situation which necessitated the keeping of more cattle's for manures. But, the excessive grazing and the scarcity of animal erosion gained further impetus. Animal productivity, too, was affected. These retrogressive vicious circles not only affected the economic stability but also accentuated the environmental problems.

Need for sustainability in agriculture and forestry Resource Development

The need of the day is to maintain an effective balance between development and environment through balanced and complementary utilization of existing natural resources. Since agriculture is the main source of income and employment for the majority of the Nepalese people, the agricultural and forestry sectors have a significant role to play in the task of maintaining such a balance.

It is evident that there exists a close interrelationship between agriculture and forestry in our farming system. The forests have remained the main source of fertile soil for agricultural and forestry-based production, manure, food, fuel wood, and watersheds for drinking water and irrigation. Therefore, sustainability in agricultural development can not be achieved unless a close coordination is maintained among agro-ecological conditions, farming systems and forestry-resource utilization. Hence, the task of advancing these three aspects as complementary and supplementary elements poses a significant challenge in the formulation of the agriculture sector plan.

Instead of considering the aforementioned inter-relations as complementary aspects, the past development efforts viewed them in isolated sub-sectoral perspective and the monitoring of the effects of such efforts also remained inefficient. As a result, agricultural productivity has not achieved stability. Soil erosion and deterioration of forest resources have continued and there have emerged further environmental problems. The continued growth in population has further aggravated the problems. Therefore, there is a great need to formulate a coordinated plan that appreciates the proper utilization of agricultural and forestry resources and the existing complementary and supplementary interrelationships among them, and too move ahead by introducing timely reforms and co-ordination through the systems of efficient monitoring both in the planning and implementation phases.

The present situation is the result of the cumulative effects over a long period of time. Therefore, it is necessary for the periodic as well as annual plans to adopt a long-term perspective for redressing the above situation.

It is essential that the Eighth plan now fully consider these problems, weaknesses and needs, and move ahead with clear objectives, policies and programmes. The biggest challenge today is to achieve stability and sustainability in agricultural and forestry development by fostering mutual complementarities among agriculture, forestry and natural resources. In the past, although top priority was adopted while making important decisions on various aspects of the economy. It has become necessary to deviate from this path and to give meaningful support to agricultural and forestry development by narrowing the gap between planning and implementation. It is also essential to lend direct support to this sector by developments in infrastructure concerning irrigation, energy, roads, communication, education, health, rural industry and human resources development. In the context of the gravity of the task of transforming the subsistence-level farmers into surplus earning, exchange-oriented farmers by extending income and employment opportunities to numbers farming families through proper decisions in infrastructure development, it is necessary that all other sectors promote the agriculture sector on a priority basis.

Bases for agriculture and Forestry Resource Development

Considering the needs as presented in the Eighth plan and following the directives of the National Development Council, the following conceptual basis has been adopted for the plans and programmes in agriculture and forestry sector.

Sustainability:

While it is necessary to increase the productivity of agriculture and forestry sector through efficient utilization of available resources, it is also equally important to maintain the sustainability of such production processes in order to safeguard the rights of future generations to these natural resources. It is necessary to achieve proper management of land, water and watersheds through decentralization and with due attention to the local needs. Similarly, the involvement of the farming families in the production system must be maintained and their efficiency in resource utilization should be increased. It is only through these measures that sustainability and stability in the growth of agricultural and forest based productions can be achieved. Therefore, the sustainability in production forms the major basis for the plan formulation and programme implementation in agriculture and forestry sector.

Farming system:

The present farming system of ours is not commodity based and market-oriented. In agriculture, farmers are engaged in various production activities involving food-crops, pulses, oil seeds, sugarcane, tobacco, fruits,

vegetables, livestock mainly to meet their own needs. Crops and livestock are indispensable also in view of the need for manures. The geographical diversity and transportation difficulties have made the distribution of products difficult, which has led our farming system to be far self-sufficiency oriented. There exist greater opportunities for gradual improvements rather than drastic changes in this farming system. It is necessary to gradually develop the farming system to a product and market oriented system by developing technologies based on farmers' resource endowments by involving of farmers in the development of technology and its use and by improving farming system through available opportunities to comparative advantages. Therefore, the existing farming system has been taken as a major basis for the formulation and the implementation of agricultural plans and programmes.

Agro-Ecological Zones:

Due to differences in topography, the country's land mass is divided into several agro-ecological zones. These zones offer both opportunities and constraints for agricultural development. It will be wise to utilize the opportunities within the limits of the constraints. It is necessary to determine suitable land use patterns on the basis of the identification of the specific advantages and potential of the agro-ecological zones. The technology for agriculture and forestry sector; extension system; production, price and market technologies and infrastructure development should be promoted on the basis of these zones. And, it is only through these measures that stability and Sustainability can be achieved in production and productivity.

The agro-ecological zones have been taken as a basis for the national and district level planning for the dissemination of appropriate technologies of agricultural, forestry and natural resources, for the identification of recommendation domains for research, for the development of monitoring and evaluation indicators, and for the development of appropriate statistical information flow.

Transport and market Facilities:

The availability of transport and market facilities can provide great support to the delivery of external inputs for the production increase and the mobilization of farm surplus to the market place at remunerative prices. Additional production demands additional investment and such investment must yield optimum results. It is essential, in view of investment efficiency, to accord high priority to full utilization of the basic infrastructures already developed such as transport facilities and market areas. Similarly, as the access to transport and markets has a great impact on the programmes related to stability in production, suitable transformations in farming systems and on production potential of agro-ecological zones, these facilities are included as one of the main bases of the formulation and implementation of the plan.

Linkage and Complementarities among programmes:

Even if a high level of effectiveness is achieved in the formulation and implementation of the plan, unless the complementary and supplementary linkages among the programmes envisaged in the plan are clearly identified, their effects will not only create adverse impact on the socio-economic environment but also make the development efforts unnecessarily very costly time consuming and even counter-productive. Therefore, the mutual linkages and complementarities among the programmes and of efficiency in the utilization of existing resources have been taken as a basis for the formulation and implementation of the plan.

Farmers' Resource Endowment:

Farmers adopt new agricultural technologies only if these technologies help the farmers in the effective and efficient use of their resources. The resource endowments of the farmers vary. Large farmers have large amounts of land holding and capital but they have less labour relative to land. In contrast, small farmers possess less land, less capital but more labour relative to land. In the past, the development of technology was based more on the researcher's interest rather than farmer's resource endowment. As a result, the research had very little impact. The production inputs. Therefore they could not significantly contribute to the growth in production as they were not in tune with the capabilities of the farmers living in remote rural areas in various agro-ecological zones. Programmes need to be formulated and implemented in such a manner that the farmers can make full utilization of the available means and resources on the basis of the diverse resource endowments. Therefore, farmer's resource endowment has been taken as a main basis for the formulation of agricultural research and extension programmes of the eighth plan.

a. Agricultural Development :

our farming system has been operating on a self-sufficiency basis. The past agricultural development efforts, too, have been directed towards supporting the traditional food-crops-oriented production system rather than focusing on diversification of agricultural production. Although food security is an important aspect of agricultural development, it is equally important to build the capacity to buy the food grain available in the market. This, in turn, demands a growth in income and employment opportunities. Therefore, agriculture, an important productive sector of our economy, needs diversification and commercialization to raise income and employment opportunities of the farmers by identifying high value, low weight crops, which have comparative advantage, such as fruits and vegetables, industrial crops and by optimally utilizing the available resources in production, processing and marketing operations.

Technology generation, technology dissemination and technology utilization are essential elements for growth and stability in production. In order to transform the traditional farming system into a farming system suited to the agro-ecological zone for a higher growth in productivity, research on appropriate technology compatible with farmers resource endowments is required.

In view of the existing unsystematic and ad-hoc approach adopted in the utilization of available improved technologies, there is an need to transform the existing agricultural extension system. Similarly, in order to maintain the balance between the growing need for agriculture workers in the rural sector and increasing expenditure on agricultural extension it has become necessary to explore the feasibility of implementing service programmes in some potential areas through going collaboration of private sector, government sector and non-government organizations.

In the context of the open border with India, it will be advisable to set up a separate agency rather than adopt a separate price policy to continually monitor the border and international prices and provide guidelines for adopting timely policies suited to national interest. The practice of retaining large land holdings has to be discouraged through appropriate tax system to encourage productive utilization of the land.

In order to alleviate poverty and to achieve sustainability in environment, resource conservation, and economic development, there is a need to formulate a long-term plan for agricultural development.

In view of the above mentioned sectoral and sub-sectoral needs, the objectives, policies, programmes and strategies for agricultural development will be as follows.

Objectives

1. To contribute to the national economy through increased agricultural production based on geographical specialization.
2. To increase agricultural production and productivity to meet the growing domestic food demand.
3. To increase production and productivity of raw materials, necessary for the expansion of agro-based industries.
4. To increase productive employment opportunities to the majority of small and marginal farmers.
5. To maintain a balance between agricultural development and environmental protection.

Policies

1. The agricultural extension programme needs to be highly effective in order to induce the farmers to use improved technology to achieve higher growth in production. In view of the growing need for agricultural workers and its subsequent financial burden on the economy, the service centres at the local level will be developed into technology extension centres in order to increase the quality and reliability of the extension services. The farmers within the range of the service centres will be organized into appropriate groups as necessary. The leader farmer of each group will be provide with training and technical assistance and developed as a focal point of contact for extension services at the village level. As the leader farmers can substitute for additional extension workers, a reduction in government expenditure on such workers will be achieved. At the same time, the present administrative expenditure will be considerably reduced by organizing all service specific agricultural agencies under one administrative umbrella. Similarly, by managing all agricultural extension and technology services from the centre to the grass root level under the leadership of a unified management system, such services will be made simple, integrated and in tune with farmer's resource endowments.

2. With the objective of infusing spontaneous dynamism and promoting investment efficiency through competition in agricultural systems, the farmers' groups, cooperatives and private entrepreneurs will be involved without any restrictions in the production, import, sale and distribution of production inputs feeds, medicines and fertilizers. The government's role will gradually be confined to the management's quality control and monitoring of parental seeds, plants and breeds.

3. As regards chemical fertilizers, the main constraints pertain to their non-availability in time rather than their prices. Therefore, a distribution system will be introduced to ensure timely availability of fertilizers at cost prices and gradual reduction of the subsidy on them. The import and distribution of fertilizer will be open to the private sector.

4. In order to encourage the involvement of the private sector, the subsidy on the prices and transport of improved seeds, fruit saplings, and improved breeds will be discontinued. Special attention will be given to quality improvement of such production inputs. The extension workers will be encouraged to induce the farmers to adopt technologies on the basis of the economic viability, suitable farming system and profitable farm schemes compatible with appropriate land-use requirements. A system will be introduced which will allow subsidy grants only through a special decision on specific cases or occasions when there exist no other alternatives.

5. Agricultural farms or parts thereof, other than those used in research, will be, on the basis of feasibility, either sold or handed over on long term feasibility, either sold or handed over on long term lease to the private sector. In such transfers, agricultural graduates will receive the first preference. Priority will also be given to associations involving technical (s) of the relevant field.

6. In service activities like animal health service, crop protection services, the involvement of private sector and co-operatives will be encouraged during the plan period. Priority will be accorded to the involvement of technicians of relevant fields.

7. A provision was made last year for agricultural research to be conducted through a council under a separate act, bringing it out of the departmental domain. Accordingly, effective steps will be taken in the direction of imparting operational autonomy to agricultural research. The agricultural research council will recommend appropriate technology packages suited to national requirements based on farmers' resource endowments in various ecological zones. Other basis for technology generation will be the physical condition and production potential of available agricultural land and the need for its conservation. In this context, priority will be given to research in hill crops and the rainfed areas.

8. An industrial entrepreneur or producer will receive tax holiday on the amount spent in research in collaboration with agricultural research council for the production and processing of food grains, meat, milk, eggs, wool, fruits, vegetables, cash crops and industrial crops.

9. The foodgrain production programme received top priority for achieving food security in the past. But, attention was not paid to livestock, horticulture, industrial crops and other agricultural activities which have the potential to increase income and employment to the farmers. Although the emphasis on food grain production must continue even today, it has become imperative to ensure food security by enhancing the purchasing power of the farmers to enable them to buy available food grains from the market. It can be done only by increasing their income and employment by promoting activities in which they have comparative advantage. Therefore, equal priority will be accorded to the commercial production. Processing and market development for various commodities which have comparative advantages, such as fruits, vegetables, livestock, fishery, industrial crops and other low-weight, high value crops. Thus, emphasis will be laid on diversification and commercialization of agriculture.

10. It will be necessary to produce high, middle and basic level manpower to develop technology and the ensure the existing academic courses will be made of high standard and a graduate veterinary course will be added to the present B.se. level courses. Technical and economic feasibility studies will be conducted for the establishment of a separate agricultural manpower by introducing M.Sc. Level studies and will undertake the management and monitoring of the activities relating to the development of high level agricultural manpower needed in the country. In view of the complementary interrelationships between agriculture and forestry in our farming system, necessary amendments will be made in the courses of study of the institutes of both agriculture and forestry. With the objective of linking both the agriculture and forestry sector, the interrelationships between agricultural research council and forestry research will be taken into consideration.

11. A central agricultural training centre will be established for the production of the middle-level and basic-level agricultural manpower, and all training centres operating under different departments at present will be organized under one roof. In view of the geographical sub-regions of the country, a small number of regional training centres will be established under the aegis of the central training centre and necessary facilities will be gradually made available to them. As regards the training of leader-farmers, the theoretical training will be imparted in the nearest regional training centre. The practical training will be conducted in the farmers' own farm land under the auspices of the service centre. Necessary changes will be made in the courses of study in order to orient the training programme towards the farmers' means, resources and requirements. The training courses will aim at enabling the farmers to adopt appropriate land-use patterns for comparative advantages through agricultural diversification based on the physical condition of the land, soil capability and soil conservation requirements. The training programme will be made effective in the perspective of the environmental aspects and the interrelationships between agriculture and forestry sectors. The agricultural information sectors. The agricultural information service and related materials will also be diversified accordingly.

12. growth in production naturally demands a situation where the increased productions can be gainfully utilized. For this purpose, it is necessary to expand the commercial sector for making the primary post harvest processing, market development and distribution system, efficient and self-operating. Therefore, by analyzing the border and international prices, arrangements will be made to determine and effectively implement reasonable support prices for agro-products, for the benefit of producer farmers. Institutional arrangements will be made to purchase agricultural produce at the pre-determined prices through the private as well as cooperative sectors. An agricultural price commission will be established to monitor the border and international prices, to analyze the cost of production of various agro products and to make recommendations for fixing reasonable support prices. The government and private sectors will be mobilized in both complementary and competitive manners for the development and expansion of market mechanism. Necessary technical support services will be provided for the establishment and proper management of wholesale markets by private sector in large urban areas. Rural markets will be established at local initiative at viable places in the Terai and the hills. Thus, the government sector will be mainly involved in monitoring the price situation for agricultural products, supervising the quality standards and providing technical support services.

13. With the objective of ensuring competitive price for agricultural products, no restrictions will be imposed upon the inter-district flow or export of these products.

14. In the past, cooperatives could not develop in accordance with cooperative principles because they were dependent on government direction and control. Therefore, co-operatives will be promoted by reorganizing them on democratic management principles cooperatives will play an important role in the delivery of technical services, production inputs, credit and market services in their areas through the mobilization of the savings scattered in the rural sector. They will thus assist in achieving stability in economic activities.

15. In order to attain growth in production, attention will be paid on non-price factors such as new technologies for growth in productivity, efficient soil analysis and treatment services, crop protection services, and seed technology services. Emphasis will also be given on the proper development and use of post-harvest technologic encompassing protection from diseases, insects, birds and rodents etc. quality standards, grading, milling, packaging and warehousing. Due attention will be given to undertake studies, research, tests and experiments for the attainment of sustainability in agricultural increase in the net income of farmers along with growth in production and productivity through the farmers' resource-oriented farming system. Similarly, reforms will be introduced to infuse efficiency and dynamism in the structural aspects.

16. In order to make the agricultural statistics reliable and suitable for the evaluation of the effectiveness of agricultural programmes, an agricultural statistics monitoring and publication subcommittee will be formed. In order to further increase their reliability, the data will have to be approved by the subcommittee prior to their publication. Improvements will be made on the methods of collection and analysis of agricultural data and institutional strengthening also will be achieved.

17. Agricultural credit services contribute immensely in augmenting the sources of financial investment required for agricultural production activities. The agricultural loan disbursement procedures will be simplified to assist the farmers, the majority of whom are small or marginal. In view of the time spent in traveling for obtaining small loans and the expenses incurred in it, which in many cases makes the bank interest rates higher than the prevailing interest rate, the credit service will be facilitated by places where there are banks or cooperatives in the neighborhood. At the same time, a systematic practice of assessing and approving annual loan needs will be instituted, credit pass books will be issued and the facility of taking loans in installment will be

introduced. In view of the inability of commercial banks to disburse credit and a specified percentage of their deposit, as provisioned in some priority sectors, arrangements will be made for such capital to be availed to the agricultural Development Bank, cooperatives or non-governmental organizations capable of making an efficient disbursement of the available fund.

18. There exist mutual, complementary and supplementary interrelations between agriculture and forestry in our farming system and these sectors can play a significant role in resource conservation and utilization in the perspective of the conservation of natural environment. Therefore, coordination will be maintained among agriculture, forestry and irrigation sectors formulating and implementing operational plans. At the same time, a long-term agricultural development plan capable of instituting structural changes in the economy, will be formulated for the attainment of high economic growth rate, along with the objectives of conservation of environment and resources, stability in economic development, and poverty alleviation. The formulation of such plan will necessarily take into consideration the population, development potentials and inter-sectoral relationships.

19. In view of the significant role played by women in agricultural activities, desirable changes in the decision-making process of the farming families will occur only if the access of women to the improved technology can be increased and their involvement in technology adoption is enhanced. These changes can significantly help increase agricultural productivity. Therefore, special emphasis will be given on the promotion of women's participation in the implementation of agricultural programmes. Priority will be given to introducing income generating activities and nutrition development programmes through women farmers' groups.

20. In order to improve the existing situation of malnutrition in the rural sector, programmes will be implemented for the identification and production of local food stuff, their production, food preparation and their utilization in children's diet. At the same time, teaching materials on nutrition will be developed and proper coordination will be established with curriculum development programme of the ministry of education for their incorporation in the courses of study of schools. Such materials will also form an essential part of the agricultural extension programme, which will primarily be targeted towards women.

21. In view of the fact that the development programmes in the past could not be very effective owing to a very weak system of monitoring and evaluation of policies and implementation aspects of the programmes, the eighth-plan, in keeping with the national policy of strengthening the monitoring and evaluation system, will specially activate the monitoring indicators which will be developed and made functional in different aspects of agricultural development during the plan period.

22. Agricultural development is directly related to many areas such as forest and land conservation, land reforms, irrigation, agricultural credit, agro-based industrial enterprise, supply of agricultural inputs and supply of manpower. Therefore, for increased effectiveness and continuity of agricultural development programmes, coordination committees will be formed and activated to coordinate with them in all stages from formulation to implementation of the plans, from the central to district and service center levels. In the light of the interrelationships between agriculture and irrigation, their organizational structure will be reviewed.

23. The activities in the agricultural sector, sub-sectors and activities of many other concerned agencies are mostly undertaken at the village level for supporting the farmers. As the local potential and comparative advantages need to be tapped in accordance with the needs of the local farmers, it becomes necessary to adopt decentralization principle with the philosophy of people's participation in the formulation, implementation, monitoring and evaluation of the plan. Therefore, the task of plan formulation and implementation will be carried out by viewing the conceptual framework of district plan as a converging point between the 'bottom up' – processes e.g. identification of the local needs, constraints, opportunities and potential of the local people and the 'top down' processes, e.g., information on national priorities, policy guidelines, high technology requirements and public resource allocation.

**A basic Model of
Agricultural Development Programme
Targets and programmes
Agricultural Production and productivity Targets
For the Eight plan**

Crop	Output			Targeted Annual Growth rate (%)	Productivity (Mt/Ha)	
	Unit	Base Year	1996/97		Base year	1996/97
Food Grains	'000 mt			5.4		
Paddy	..	3,392.0	4,452.0	5.5	2.350	2.850
Maize	..	1,168.0	1,476.0	4.7	1.570	1.930
Wheat	..	840.0	1,258.0	8.4	1.400	2.040
Millet	..	213.0	236.0	2.1	1.110	1.140
Barley	..	27.0	32.0	3.4	0.930	1.140
Buck wheat	..	23.0	32.0	6.8	0.540	0.640
Pulse crops	..	124.0	186.0	8.4	0.600	0.820
Cash Crops	..			9.1		
Oil seeds (including peanuts)	..	108.0	174.0	10.0	0.647	0.906
Sugarcane	..	1,106.0	1,530.0	6.7	33.560	38.250
Tobacco	..	6.3	9.5	8.6	0.854	0.990
Jute fibre	..	16.4	25.0	8.8	1.215	1.400
Horticulture				5.4		
Citrus	..	86.0	128.0	8.3	9.520	9.820
Other	..					
Fruits	..	416.0	507.0	4.0	9.940	10.290
Vegetables	..	1,075.0	1,278.0	3.5	7.090	9.100
Potato	..	738.0	1,033.0	7.0	8.680	10.760
Livestock Development				3.8		
Milk	..	865.0	1,028.0	3.5		
Eggs	Nos.	3,69,519.0	4,79,791.0	5.4		
Meat	'000mt	147.0	173.0	3.3		
Wool	Mt	767.0	814.0	1.2		
Fish	Mt	12,656.0	22,311.0	12.0		
<u>Miscellaneous</u>						
Tea	'000mt	1.5	2.5	10.7		
Cotton	..	1.7	7.1			
Silk (cocoon)	Mt	30.0	400.0			
Mushroom	Mt	56.0	300.0			
Ginger	'000	19.5	32.5			
Cardamom	Mt	3,002.0	3,540.0			
Coffee	Mt		153.0			

a. Production targets and programmes

Crop production programme

The annual crops like food crops, cash crops and fruits and vegetables contribute more than fifty percent to the total agricultural production. These crops also have a major share in the daily food intake of the common people. Thus, these crops contribute significantly in providing cheap and easily available sources of calories, proteins and other nutrients.

Agriculture will also have to generate opportunities of direct or indirect employment to the majority of Nepalese families. Therefore, during the eight plan, the crop programmes will be implemented on the basis of their comparative advantages in respect of employment generation and income growth. Emphasis will be laid on the productivity of land per unit with due attention to crop intensification and inter-crop complementarities. The development projects to be undertaken in the course of programme implementation will be assessed in terms of their impact on the environments and sustainability. Taking into consideration the local requirements and the resource capabilities of the farmers, necessary agricultural inputs and technical support services for the programme will be made available on a time-bound basis to meet the needs of the farmers at different times. Marketing efficiency and support price for farmers will be encouraged through effective price and market

information services. Efficiency in the delivery of agricultural inputs and transaction of agricultural products will be increased by encouraging the involvement of cooperatives and private sector in these activities. It is in these overall perspectives that the crop programmes will be implemented.

1. Food crops⁵

Major food crops such as paddy, maize, wheat, millet, barley and pulses occupy the most significant place in the food supply of the common people. The production levels of these crops are as follows.

The production and productivity level of some

Major Food Crops during fiscal Years

1990/91 and 1991/92

Area: '000 Metric Tons

Production: '000 Metric Tons

Productivity: M. Ton/Hectare

Crop	1990/91			1991/92		
	Area	Production	Productivity	Area	Production	Productivity
Paddy	1455	3502	2.407	1412	3222	2.282
Wheat	593	836	1.410	571	779	1.364
Maize	758	1231	1.624	754	1205	1.598
Millet	199	232	1.166	198	229	1.156
Barley	30	28	0.933	30	28	0.933
Pulses	268	161	0.601	262	155	0.592

In order to increase the production and productivity of these crops, the following crop programmes will be implemented during the eighth plan.

Paddy:

As paddy occupies 54 percent of the production and productivity of these crops, the following crop programmes will be implemented during the eighth plan.

The base year has recorded a production of 3,392,000 m. tons of paddy with an area of 1,446,000 hectares. By extending irrigation facilities to rain fed areas and by introducing two rice crops in irrigated areas, an additional 18,000 ha. of land area will be brought under paddy cultivation. The total paddy area in the country will reach 1,564,000 hectares in the final year of the plan. Thus, with the additional production of 1,060,000m. tons, the paddy production level will reach 4,452,000 m. tons by the end of the plan. It is targeted to increase, within the eighth plan period, the paddy yield to 2.846 m. ton per ha from the average productivity of 2.346 mt. per. ha. of the base year. The area covered by improved seeds is targeted to increase from 55 percent in the first year of the plan to 75 percent in the final year.

The paddy crop program will be implemented in districts of the Terai account for approximately 73 percent of land suitable for paddy cultivation in Nepal and produce about 74 percent of the total paddy. Therefore, an intensive programme will be implemented in these areas on a priority basis. Similarly, in order to increase the supply of food grains in the hills locally, an intensive paddy crop production programme will be implemented in the hills, in areas with a warm climate and low altitude (upto 900m.), such as rainfed lowlands and river valleys which are capable of yielding two paddy crops a year. In irrigated areas, improved technology, irrigation facility, agricultural credit, production inputs and technical support services will be provided through an integrated approach. The use of technology recommended by agricultural research will be emphasized in irrigated areas.

Rain-fed Area:

⁵ Average of the figures of the base year 1988/89-1990/91

Emphasis will be given particularly to the use of improved seeds and of crop protection measures in the programmes to be implemented in the potential rain-fed areas of the country.

Maize:

Maize is the second major food crop of Nepal and occupies about 28 percent of the total cultivable land. While two-thirds of the total maize production come from the hills, it is essential to further increase the production level of maize in order to improve the food supply situation in the hill areas. Increase in production will be achieved by raising the productivity through the use of improved seeds and better plant protection methods. Similarly, in order to bring about an increase in the total production, emphasis will be given on intensive cultivation of winter and spring varieties of maize also in the river valleys and in the Terai area.

In the base year, total maize area was 744.00 ha. with a total production of 1,168.00 m. tons. by the end of the eighth plan, an additional 3.80,00 m. tone of maize will be produced through the growth in productivity, and the level of total maize production will be raised to 1,476,000m. tons the average yield of maize will be increased to 1.939 m. tons per ha. from a level of 1.57m. tons per hectare. The area covered by improved seeds is targeted to be increased from 40 percent in the first year of the plan to 60 percent in the final year.

Separate maize production programmes will be implemented in irrigated and rain-fed areas.

Irrigated Area:

An intensive programme in maize crop will be implemented in the more feasible irrigated areas of hills as well as the Terai which have easy access to transport and market facilities. An integrated approach of delivering improved seeds, chemical fertilizers, crop protection chemicals, agricultural credit and technical services will be adopted.

Rain-fed Area:

In rain-fed areas, emphasis will be given on the use of improved seeds and better methods of crop protection.

Wheat:

The area under wheat has increased steadily in the past and it has emerged as an important winter crop. It now occupies about one-fourth of the total cultivated land, it holds the third position in total food grain production. In view of the limited availability of the cultivable land in the country, wheat has the potential for intensification as well as for area expansion.

It is estimated that with wheat area 599,000 ha. and the production stood at 840,000 m. tons in the base year. During the eighth plan period, an additional production of 418,00 m. tons will be achieved through the expansion of the wheat crop area in additional 16,000 hectares. Thus, in the final year of the plan, the level of production will have risen to 1,258,00 m. tons from a total wheat area of 615,00 hectares. The yield is targeted to be raised to 2.045 m. tons per ha. within the plan period from the average rate of 1.402 m. tons per hectare in the base year. It is targeted that the area covered by improved seeds will increase from 80 percent in the first year of the plan to 100 percent in the final year.

The wheat production programme will be implemented by having two separate programmes for the irrigated and rain-fed areas.

Irrigated Area:

The wheat production programme will be mostly concentrated in the hill and terai areas with easy access to irrigation and transport facilities. An intensive production programme will be implemented in such area by providing integrated access to improved seeds, chemical fertilizers, crop-protection services, technical support services and agricultural credit.

Rain-fed Area:

In order to increase wheat production in the rain fed areas in the hills and the Terai, emphasis will be given on the use of improved seeds and the use of chemical fertilizers commensurate with the level of moisture in the soil.

Hill Crops:

The hill crops such as millet, buckwheat and barely, which are mostly cultivated in rain-fed and marginal land, occupy about 6 percent of the total cultivated land. Their contribution to the total food grain production is significant.

In order to improve the food supply situation in the hills, it is necessary to bring about improvement in the productivity growth hill crops. But, in the absence of established improved technology for these crops, growth in productivity will be achieved through the use of improved seeds. By the final year of the plan, these crops will have recorded additional production as follows: millet 23,000 m. tons, barley 5,000 m. tons and buckwheat 9,000m. tons. the yields of these crops will be increased from 1.109mt/ha, 0.931 mt/ha and 0.53 m.tons per ha in the based year to 1.140 m. per ha, 1.43 m. per ha and 0.64 m. per ha in millet, barely and buckwheat, respectively.

Pulse Crops

Pulse crops also have a significant role in the farming system. The cultivation of these crops not only increases the fertility of the soil but also helps in providing protein in the daily staple diet of the people. These crops also play an important role in foreign exchange earnings.

The base year production of pulses was 160,000m. tons from an area of 267,000 ha.

During the eighth plan period, attention will be focused on a few major pulses, and yield levels will be raised from 0.602 m. tons to 0.823 m. tons per hectare. For this purpose, emphasis will be given on soyabean, black gram, rice beans and cow peas in the hilly regions and on lentil, gram, rice beans and cow peas in the hilly regions and on lentil, gram, pigeon pea and soyabean in the inner terai based on production potentials of specific areas. Preference will be given to soyabean for the supply of raw materials to agricultural-based processing industries and to legumes such as lentil, gram and pigeon pea for export promotion. Priority will be accorded to the use of improved seeds and crop protection chemicals. The area and production of pulses will be increased from the base year levels of 206,000 hectares and 124,000 metric tons to 226,000 hectares and 186,000 metric tons respectively by the final year of the plan.

Other Minor food crops

Studies on the production level and socio-economic importance of minor food crops which are supplementary sources of food supply, e.g., grain amaranth, popcorn, fox tail millet and sorghum, will be undertaken to form a basis for the development of these food crop resources in the Ninth plan.

Agricultural inputs and Technical support Services:

Agricultural inputs required for food crops such as improved seeds, chemical fertilizers, pesticides, agricultural tools, agricultural credit etc. are presented under service programmes in the appendix to the chapter on management of agricultural inputs.

The details of the production targets with regard to the above food crops are presented in the table below.

Table
Food crop production target for the eighth plan

Area: '000 hectares

Production: '000 metric tons

Productivity : m. ton/hectare

Crop	Fiscal year	Details	Irrigate	Rain-Fed	Total
Paddy	Base Year	Area	490	956	1446
	1988/89-	Production	1460	1932	2292
	1990/91	Productivity	2.979	2.021	2.346

	1996/97	Area Production Productivity	570 2171 3.809	994 2281 2.295	1564 4452 2.846
Maize	Base year 1988/89- 1990/91	Area Production Productivity	68 162 2.382	676 1006 1.488	761 1476 1.939
	1996/97	Area Production Productivity	74 221 2.986	687 1255 1.827	761 1476 1.939
Wheat	Base Year 1988/89- 1990/91	Area Production Productivity	223 427 1.915	376 413 1.098	599 840 1.402
	1996/97	Area Production Productivity	248 702 2.831	367 556 1.515	615 1258 2.045
Millet	Bases year 1988/89- 1990/91	Area Production Productivity			192 213 1.109
	1996/97	Area Production Productivity			207 236 1.140
Barley	Base year 1988/89- 1990/91	Area Production Productivity			29 27 0.931
	1996/97	Area Production Productivity			28 32 1.143
Buckwheat	Base year 1988/89- 1990/91	Area Production Productivity			43 23 0.535
	1996/91	Area Production Productivity			50 32 0.6400
Pulses*	Base year 1988/89- 1990.91	Area Production Productivity			206 124 0.602
	1996/97	Area Production Productivity			226 186 0.823

* This head consists of black gram, soyabean, lentil, pigeon pea and gram.

2. Industrial and Cash Corps:

The industrial and cash crops contribute not only to the supply of raw materials to agro-based industries but also to the growth in income and employment opportunities to farmers and the diversification of agriculture. The levels of production of some important crops are given below.

The levels of Production and productivity of some major cash crops in the fiscal years 1990/91 and 1991/92

Area: '000 hectares

Production: '000 metric tons

Productivity : m. ton/hectare

Crop	1990/91	Preliminary Estimate for 1991/92
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	Area	Production	Productivity	Area	Production	Productivity
Sugarcane	33	1106	33.515	37	1291	34.892
Tobacco	7	7	0.957	6	6	0.921
Oilseeds	156	92	0.589	155	88	0.568

* productivity is based on full figures.

Oilseed:

The cooking oil holds a significant place in the daily food of the people. Apart from providing domestic cooking oil, these crops contribute raw materials to the vegetable ghee industries and by products to the promotion of the export trade. Nepal has not achieved self reliance in these crops and every year about Rs. 400 million is spent on the import of oil. Therefore, it has become necessary to increase the production of oil-seed crops not only to acquire self reliance in the domestic supply of oil but also to promote the export of mustard oil seeds.

In the base year, total oilseed area was 167,000 hectares with the total production of 198,000 m. tons of oilseed (including groundnut). During the eight plan, it is targeted to increase the production level to 174,000 m. tons with a additional production of 66,000 m. tons from groundnut, rape seed, colza mustard and mustard. Emphasis will be placed on both the expansion of area and the growth in productivity, and the yield level of groundnut will be increased by 0.8m. ton per ha and that of other oilseeds by 0.211 m. ton per hectare within the plan period. This will raise the average yield per hectare to 0.906 m. tons by the end of plan from 0.647 in the base year.

To attain an increase in productivity, emphasis will be given on the use of improved seeds, fertilizers and crop-protection services. Intensive supply of improved seeds, chemical fertilizers, agricultural loan, pesticides and technical service will be made to highly potential areas in the hills, inner Terai and the terai. As regards the supply of improved seeds, while the supply of about 20 percent of total requirements will be made available by the government through institutional arrangements, the rest will be met through the high yielding seeds produced by the farmers themselves. In view of the ever-expanding market of processed oil, a study will be conducted on the multiple uses of oil including the use in cooking, the production potential of such oil-seeds in Nepal and the feasibility of promoting processing industries. Concrete policy will be adopted on the basis of policy implications shown by the study. The utilization of the produced oil seeds will be done at reasonable prices by the oil industries, vegetable ghee industries and the exporters of oilseeds and the assistance of thee federation of Nepal chamber of commerce and industries will be sought to maintain coordination.

Sugarcane:

Compared to the estimated demand for 55,000 m. tons of sugar by the end of the seventy plan, there was a total production of 30,000m. tons resulting in a deficit of 25,000 m. tons of sugar. If the existing and the proposed sugar mills run into full operation, a total of 71,400 m. tons of sugar can be produced from the local production of sugarcane. Thus, there exists the potentiality of achieving self-reliance in sugar.

The total demand for sugarcane is estimated to be 1,106,000m. tons; 540,000 m. tons for existing five sugar mills to run in full capacity, 45,00 m. tons for additional proposed mills to be established within the eighth plan period and 116,000 m. tons for molester industries. Similarly, cottage industries producing coarse brown sugar (sakkhar) will require about 62,000 m. tons of sugarcane. Besides, some additional production of sugarcane will be required for farmers miscellaneous uses.

While the total production of sugarcane was 1,106,000 m. tons from 33,000 ha.in additional 7000ha of land during the eighth plan period in order to meet the additional demand of sugarcane. By achieving an increase of additional 424,000 m. tons through increased productivity, the total production of sugarcane is targeted to be raised to 1,530,000 m. tons.

An intensive sugarcane production programme will be implemented on a priority basis especially in the command areas of sugar mills. In other sugarcane growing areas in the country, a general programme will be launched in order to support the local molasses, coarse brown sugar (sakkhar), and dry molasses industries. As 87 percent of the total sugarcane production of the country in carried out in 11 Terai districts from Morang to Kapilvastu, emphasis will be placed for the supply of improved planting materials, technical services, irrigation, agricultural credit and fertilizers under the intensive programme for attaining a growth in productivity in these districts. In order to increase the sugarcane crushing period of sugar mills, provision of additional premium will be made through the mills to encourage farmers to produce early crop. To increase productivity in sugarcane farming, the use of improved variety of sugarcane will be increased to 90 percent by the final year of the plan from 70 percent

in the first year. Similarly, apart from imparting training to farmers, proper arrangements will be made for the timely supply of agricultural inputs. The demand for planting materials will be met through farmers' production under the aegis of agricultural extension service in coordination with sugarcane development programme. Private sector's participation will be encouraged with a view to inducing competition in the distribution of sugar. Sugarcane producers and sugar mills will be encouraged to fix reasonable prices for the producers' sugarcane as well as the miller's sugar, and also establish and mobilize a fund in mutual collaboration for the development of infrastructure for sugarcane farming and sugar mills. The concerned sugar mills will also be inspired to promote industries utilizing their by-products and to adopt appropriate measures for preventing environmental pollution.

The adoption of improved farming practices will also be gradually extended in other sugarcane producing areas of the country in order to achieve and increased productivity level.

Tobacco:

Tobacco farming has an important role in supplying raw materials to the cigarette and biri factories established in the country and to substitute import. At present, tobacco farming, apart from meeting the domestic demand for tobacco, supplies 16 percent of tobacco for cigarette production. In view of the increased demand for suitable variety of cigarette-tobacco and other kinds of tobacco, it has become necessary to give special emphasis on the increase of tobacco production for attaining self-reliance in this field.

In the base year (1988/89-1990/91), tobacco farming was undertaken in 7,400 hectares, and the total production was 6,320 m. tons. by the end of the eighth plan, it is targeted to raise the production level to 9,500 m. tons through an additional production of 3,180 m. tons. this will result in meeting 55 percent of the demand cigarette tobacco from domestic production. The yield level of tobacco will be increased from 0.851 m. ton per ha in the base year to 0.99 m. ton per ha during the plan period. An intensive production programme will be launched in potential districts of the central Development Region where most of the cigarette and Biri factories are located and also in the adjoining areas of the factories proposed to be established in future. An integrated delivery of improved technology, seeds, technical support services and agricultural inputs will be ensured to these areas. In order to meet the increasing domestic consumption of tobacco a general programme will be implemented in other potential areas. In such areas, tobacco production will be increased through the extended use of improved seeds.

In order to achieve the tobacco production target, other industries established in the private sector, apart from the Tobacco development company will also be permitted to arrange contract farming, processing and the purchase of tobacco directly from the farmers' level. For promoting the quality of the tobacco produced in Nepal, emphasis will be given on the use of compost fertilizers and credit facilities will be extended to farmers' groups for the construction of barns. Similarly, opportunities will be explored to assess the feasibility of the export of cigarettes made from low-nicotine tobacco produced in Nepal.

Jute:

There has been a gradual decline in the area and production of jute, a cash crop of the Terai districts of the Eastern Region. As synthetic fibers are progressively replacing jute, and other competitive crops (paddy, maize) provide better economic benefits, jute and jute goods have lost their attraction to the farmers. Since jute is a labour intensive crop, it is small-farmers who are mostly involved in it.

While the base year (1988/89-1990/91) recorded a production for 16,000 m. tons of jute fiber and 91 m. tons of improved seeds, it is targeted to raise the production of the fiber and improved seeds to 25,000m. tons and 117 m. tons respectively by the final year of the plan.

The research unit of Jute Development Corporation will be brought under the aegis of National agricultural Research council and involved in the research of high-yielding varieties and other production technology of jute. The jute seeds will be produced in the private sector through leader farmers. Depending upon feasibility, appropriate steps will be taken for the production of jute seeds and their export in future. His majesty's government will adopt the policy of non-interference in matters of marketing and price. Jute extension activities will be incorporated into the regular agricultural extension programme and the organizational structure of jute Development corporation will be adjusted accordingly.

Cotton:

It has become necessary to increase income and employment opportunities for farmers as well as to provide support to textile industries through the utilization of the potentialities of cotton production. At present, there are three major textile industries, namely Hetaunda textile industry, Butwal textile industry and Jyoti spinning Mills. The total annual requirement for these mills appears to be 3,150 m. tons of cotton yarn. Similarly, in view of the increasing annual demand for cloth and clothing proportionate to the growing population of the country, it is inevitable that the number of textile industries will go on increasing, and the demand for their raw material, cotton, is anticipated to grow accordingly.

By the end of the eighth plan in 1996/97 it is targeted to raise the cotton area from 2,000 hectares in the base year (1988/89-1990/91) to 4,800 ha. by expanding cultivation in 2,800 ha. by achieving an increase of 0.629 m. ton per hectare in the yield level, the yield will be raised to 1.479m. ton per hectare by the final year of the plan. Thus, by the end of the plan period, the production level will be increased to 7,100 m. ton from 1,700 m. tons in the base year by achieving an additional production of 5,400 m. tons. During the plan period, while the matters relating to the price, purchase and processing of cotton will be left to the private sector, the cotton extension programme will be incorporated into the regular agriculture extension programme and the research work will be handed over to agricultural research council. The supply of necessary improved seeds to the farmers will be made through leader-farmers' groups.

Silk:

Sericulture based on mulberry and castor seed plants can assist considerably in improving the standard of living of farmers through the creation of gainful employment opportunities, especially to rural women. It also helps in conserving the environment and controlling erosion in hilly terrain. On these grounds, sericulture can be considered to be highly beneficial to Nepal.

In the eighth plan, sericulture will be further developed by making the existing silk farming more productive through easy accessibility to essential services, additional expansion of farming area and increase in productivity. According to an estimate, while the total area covered by mulberry plantation is 496 hectares, production is expected to have begun in 80 hectares given a yield of 30 tons of cocoon. By the final year of the plan (1996/97), with the involvement and participation of additional 2,131 farm families, the mulberry plantation is targeted to increase by additional 533 ha. and the production of cocoon to be raised to 300 tons. In castor sericulture (based on castor seed plants), 100 tons of cocoon will be produced within the plan period by involving 500 farmers. A study will also be conducted for the long term development of sericulture.

In order to achieve the proposed target and to establish sericulture as a gainful agricultural vocation, the farms and centres producing silk worm eggs and other extension infrastructure providing technical priority will be developed and actively mobilized. Special priority will be given to the adaptive research, extension, training and production programmes relating to sericulture. By mobilizing domestic and external resources for the management of parental sources of silk worm, efforts will be made to achieve self-sufficiency in the supply of silk-worm eggs. In keeping with the emphasis on sericulture, degraded forest land with potentialities for sericulture will be made available through the assistance of forestry development programme to farmers or farmers' groups on lease. While the cocoon being produced by farmers are being so far purchased and processed by government farms, these functions be taken over by farmers' groups or private entrepreneurs by the end of the plan period. The government farms will involve themselves only in training, demonstrations and the protection of parental stocks.

To promote the involvement and participation of rural farmers in the production programme, emphasis will be given on the production, sale and distribution of necessary saplings to the tune of 10,565,000 numbers by facilitating the establishment of nurseries through farmers' groups or the private sector. The government farms will take care of the production and supply arrangements for silk worm eggs.

Tea:

In the context of the feasibility of quality tea production in the eastern region of Nepal, self-reliance in tea is targeted to be achieved through an accelerated increase in tea plantation. There also exist prospects of promoting export through better quality tea production in the hills. The annual demand for tea in Nepal is expected to be around 4,000,000 kgs. Out of this, 40 percent is met through domestic production and the rest through import. The demand for tea is sure to increase in view of the population growth and the increase in tea drinking habit. At the same time, tea farming, being a labour intensive activity, is a sector that provides opportunities of income and employment to agricultural labour. However, the extension of plantation area and effective increase in

productivity have not been achieved because of heavy reliance for the promotion of tea plantation with tea development corporation. While the corporation has been grappling with its own management problems, there is a lack of concrete policy measures to exploit the potentialities of the hilly region for tea production.

In the eighth plan, considering these problems, needs and potentialities, tea production and development programme will be launched to expand the tea plantation activity.

In the eighth plan, by bringing about improvement in the productivity of tea estates, the estimated production level of 1,500m. tons in the base year 1991/92 will be increased to 2,485 m, tons by the final year of the plan. In respect of area expansion, by undertaking tea plantation in additional 1,462 hectares, the area will be raised to a total of 4,187 hectares. As per the target, the shares of Nepal Tea Development corporation, private tea estates and small tea producing firmest in the production level will be 39 percent, 56 percent and 5 percent respectively in the final year of the plan as against their respective shares of 40 percent in the base year. Similarly, their shares in plantation area will stand at 34 percent, 51 percent and 15 percent at the end of the plan period as against the base year percentage of 41, 48 and 11 respectively.

With the objective of achieving the above targets, a tea development programme will be mobilized as under:

1. Priority will be accorded to the participation of private sector, cooperatives and small farmers in the expansion of tea plantation. Potential tea plantation areas of the eastern hill region will be exempted from land ceiling. A one time capital subside (excluding the purchase of land) will be given to entrepreneurs for the establishment of private nurseries whose aim will be to produce and supply tea saplings to cooperatives and small within half an hour's walking distance from the co-operative or small farmers' tea-plantation area. Necessary provisions for training and technical services will also be arranged for such entrepreneurs.
2. In order to ease the problem of selling green tea leaves of the small farmers' groups, technical support services will be provided for the establishment and operation of tea processing plants at the initiative of small farmer' groups or co-operatives. An excise duty and income-tax exemption will be granted to such processing plants established by the farmers' groups and cooperatives or by private entrepreneurs with the purpose of buying small farmers' production of green-tea leaves.
3. Depending upon feasibility, degraded forests or other public areas will be earmarked for the expansion of tea plantation area and will be made available on a priority basis to agricultural labour groups or small farmers' groups on a long-term lease basis. Arrangements will be made for providing monthly consumption loan from financial institutions to those having obtained public area as mentioned above and to the private agricultural entrepreneurs wishing to switch over from other crop farming to tea-farming provided on the basis of pass books recovered in five years in installments from the time the production begins.
4. foreign investment or joint investment of domestic and foreign investors will be encouraged for the expansion of tea plantation and the establishment of processing industries.
5. As there exists a great potential of increasing productivity, attention will be paid to improvements in the quality standards of the tea plants, management of the farms, plucking of levels, and processing and packaging technology. A programme will be introduced through Agricultural extension programme to impart training and to produce necessary technical manpower.
6. For ensuring the supply of fire wood required for tea processing, tree plantation area will be demarcated and due attention will be paid to tree plantation work along with the implementation of tea development programme. Areas demarcated for such tree plantation will also be entitled to exemption from land ceiling.
7. Nepal tea development Board will be reorganized ad activated as a consultative agency. It will offer recommendations to his Majesty's government in adopting necessary policy measures and in taking timely steps for the promotion of tea-farming. The board will make its recommendations after monitoring and conducting studies on aspects like the expansion of tea plantation, the impact of tea cultivation on income and employment opportunities to farmers particularly, the economically deprived sections, improvement in the quality standards of tea and the arrangements for reasonable price and market facilities to tea producers.
8. In keeping with the policy of gradually transferring the economic activities to private entrepreneurs, the present management of Tea Development Corporation will be handed over to the private sector by adopting appropriate procedures within the plan period.

Coffee:

Although coffee production is still confined to a few districts in the kingdom, coffee plantation is gaining popularity. An increase in the production of a cash crop like coffee will not only substitute for export but will also enhance income and employment opportunities to farmers. Therefore, a coffee plantation programme will be launched to promote it in other potential areas of the kingdom.

Coffee production programmes will be implemented on a priority basis in a few districts in the western Region. By expanding the coffee area by additional 170 hectares during the plan period, the total area is estimated to increase to 350 hectares by 1996/97, of this, production is expected to begin in 51 hectares giving a yield of 153 m. tons. yield levels will increase from the percent 0.2m. tons per ha. to 0.3 m. tons.

Intensive coffee programmes will be implemented in the districts of plapa, Gulmi and Arghakhanchi, Where technical services will be provide from coffee development centre wile other production inputs such as fertilizers, agriculture credit etc. will be supplied by concerned institutional agencies. For improved seeds/saplings, selected local farmers will be encouraged to produce and arrange their supply. By launching a publicity campaign about coffee farming in potential districts, some interested pioneer farmers will be selected and taken on a study tour of coffee producing districts to familiarize them with coffee farming and its economic significance. Thus, emphasis will be laid on the extension of coffee farming to other districts, too. Experimental studies will be conducted in collaboration with agricultural research council on improving the coffee variety and relevant technology. Special emphasis will be given to promote coffee plantation by providing degraded forest areas on long-term lease with the cooperation of forestry management programme to farmers groups, cooperatives or entrepreneurs willing to introduce coffee farming.

Mutual co-ordination will be established between coffee processing industries and producers for the development of market for coffee beans. A training programme on coffee processing will be introduced in collaboration with the central food research laboratory and the agricultural training centre.

Cardamom:

Cardamom farming is undertaken as a cash crop activity in some districts of the eastern hills of Nepal. While cardamom is a low weight, high-value crop, it grows in moist waste land by streams and ravines (marginal land) in the hills. Cardamom farming has not only contributed to the amelioration of the economic condition of farmers through increased income and employment but has also assisted in the promotion of export trade, therefore, it is targeted to expand cardamom cultivation in additional 1,127 hectares within the plan period. Thus, it is estimated that by the end of the plan period the cardamom production will reach 3,540 m. tons with a total area of 7,411 hectares. Arrangements will be made for the production and supply of necessary saplings for cardamom farming from private nurseries. In order to improve the cardamom quality standards, the use of improved drying technologies will be emphasized with the cooperation of the central food research laboratory.

In view of the difficulties being faced by producers with regard to the fluctuations in the demand and market prices mainly caused by cardamom traders, the farmers will be encouraged to organize themselves in producer groups. By making arrangements for the provision of agriculture credit to meet the needs of the farmers, assistance will be provided in enhancing their power to bargain with traders. Emphasis will be laid on expanding the domestic market by conducting studies on the domestic consumption, import of cardamom, and its multiple uses. Selected interested leader farmers from other potential areas of the country will be taken on a study tour of the cardamom farms in the Eastern region with a view to extending cardamom farming to other areas. Small and marginal farmers will be permitted on pa priority basis to undertake cardamom farming in potential forest land with the cooperation of the forestry management programme, without causing any adverse impact on the conservation of forests.

Ginger:

Ginger, apart from being used as a spice in the daily food varieties, is also an important crop that enhances farmers' income. It is cultivated in rain fed areas of the hills by small and medium farmers. It also occupies an important place as an exportable farmers. It also occupies an important place as an exportable crop. Ginger is mostly exported to India either fresh or as 'sutho' (dried ginger). In order to promote its farming, ginger production programmes will be implemented on a priority basis under the spices development programme. By expanding ginger farming in selected districts, the total area will be increased to 4,226 hectares by the end of the plan from a level of 3,433 hectares in the base year. With added contribution from the expected growth in

productivity, an additional production of 13,000m. tons in expected, which will raise the production level to 32,500 m. tons. to attain the growth in productivity, a programme to improve the ginger varieties will be introduced under the aegis of the agricultural Research council. Technical services will be provided to develop parental stock for plantation at the farmers' level. Other agricultural inputs and agriculture credit will be provided by the concerned agencies.

Mushroom:

Mushroom is gaining significance in agriculture as a complementary crop in view of its contribution to the enhancement of the income of small farmers. Its has because necessary to increase the production so as to meet the urban demand for mushroom. While the production of mushroom stood at 56 m. tons in the base year, it is expected to increase the production level to 300 m. tons through the production of different varieties of mushroom such as Aqaricus bisporous, pleurotus, ostreatus and straw mushroom etc. the production programme will be concentrated on the surroundings of the urban areas. In order to achieve the target, the supply of 205,000 bottles of spawn require for mushroom production will be made available at the farmers level, by organizing pioneer seed producer farmers with the assistance of plant pathological programme. Such pioneer producer farmers will also be encouraged to participate in the production extension activities. The supply of chemical fertilizers and crop protection inputs will be arranged through the private sector.

Agiculture:

As apiculture can be of assistance increasing the income of small farmers in the rural sector, it is targeted to gradually extend apiculture in various feasible areas of the kingdom.

The target is to distribute additional 4,400 nucleus hives and produce additional 50m. tons of honey during the English plan. This programme will be implemented in the hills on a priority basis. For this purpose, while skill development will be emphasized at the local level for the construction of improved beehives, training in apiculture will also be imparted. The bee hives will also be produced at the local level through the leader farmers by provisional the necessary training. Within the English plan, additional 815families will be involved in modern apiculture.

Agricultural inputs and technical services:

The details relating to agricultural inputs including chemical fertilizers required for industrial and cash crops are included in the service oriented programmes presented in the chapter on management of agricultural inputs. Technical services are dealt with in the chapter dealing with extension and training.

Projections for some industrial and cash crops are presented in the table below.

Table 5

Highway sector	Fruits to be accorded priority
1. East-west highway	Mango, litchi, pineapple, banana
2. Kathmandu-Pokhar-Tansen Highway	Citrus Fruits, Banana
4. North-South link Roads	
4.1 Taplejung-Phidim-Illam-Birtamod Highway	Orange, Sweet Orange, pear
4.2 Basantapur-Dhankutta-Dharan-Biratnagar Highway	Orange, Sweet Orange, Mango, Banana, Pineapple
4.3 Sindhuli-Bardibas Highway	Mango, Litchi, Banana
4.4 kodari-Lamosangu Highwar	Citrus Fruits
4.5 Sordang-Trishuli –Kahtmandu Highway	Apple, Mango, Banana, Litchi
4.6 Kahtmandu-Daman-Hetauda-Birgunj Highway	Apple, mango, banana, Litchi
4.7 Gorkha-Khairani-Mugling – Narayan Ghat Highway	Citrus Fruits, pineapple, banana
4.8 Beshishahar-Dumre Highway	Citrus fruits
4.9 Baglung-kusma-Pokhara Highway	Citrus fruits
4.10 Tamghas-tansen-siddhartha Nagar Highway	Citrus fruits, mango, banana
4.11 Sandhikharka-Gorusinge highway	Citrus fruits, pear
4.12 Salyan –tulisipur-Lamahi Highway	Mango, Banana
4.13 Surkhet-Nepalgunj Highway	Mango, Banana
4.14 Dhangadi-Dadeldhura Highway	Mango, Banana, citrus fruits

Table 6**Districts to be accorded priority under the intensive fruit crop extension programme in Accordance with local potentialities**

S. No.	Crop		Districts
	Chief Crop	Auxiliary Crops	
1.	Apple	Other temperate fruits	Rolpa, Rukum, Jumla, Dolpa, Mustang, Kali-Kot, jajarkot, doti
2.	Walnut, Lemon, Almond	Other Temperate fruits	Darchula, Bajhang, Humla, mugu
3.	Orange	Other citrus fruits	Bhojpur, and sankhuwasabha, dailekh, Achham
4.	Nepal Sweet orange	Other citrus fruits	Ramechhap, sindhuli, okhaladhunga, khotang, bhojpur
5.	Coconut and betel Nut	Blach Pepper, pine apple, Banana	Jhapa, Sunsari, Morang
6.	Grape		Bank, bardiya
7.	Coffee	Other citrus fruits	Palpa, Arghakhanchi and Gulmi

2. The regular programme will be implemented in all 75 districts in the areas not covered by the intensive programme. This programme will assist the farmers by supplying them with information on sources of saplings and other extension materials. Besides, by enriching their skill in fruit farming, the programme will encourage the farmers to gradually adopt orchard development programmes. In addition, some new horticultural crops (avocado, mangos teen, macadamia nut etc.) will be promoted.

3. Technical services to already developed fruit orchards will also be provided under the intensive programme.

4. For the supply of seeds and saplings, emphasis will be laid on the establishment and strengthening of nurseries at the local level. Private nurseries and seed producers will be supplied with resource seeds and mother plants through government programmes. Private sector will gradually be involved in the production of such resource seeds and mother plants, too. Private sector participation will be encouraged in the distribution as well as production of healthy plants with the help of tissue culture technology. The demand for plants at the farmers' level will be met from local nurseries. For this purpose, proper co-ordination will be established between the nursery programme and the orchard development programme. Quality standards will be maintained by monitoring the plants produced in the nurseries. Stability in local programmes will be achieved by developing the nursery owners as horticulture promotion agents, by imparting them necessary training. In this way, the degree of reliance on government will be slowly decreased.

5. Insecticide and pesticides, and chemical fertilizers and agricultural tools, necessary for horticulture farmers and nursery owners, will be supplied through the agriculture inputs corporation and cooperative societies. Arrangements for agricultural credit will be made through the agriculture development Bank and other commercial banks.

Vegetable farming Development programmes:

Vegetable farming has become significant for the improvement of the nutritional status of the general public and for the increase in income and employment to small farmers. During the eighth plan, the vegetable development programme will be implemented on a commercial basis in order to meet the market led demand of the urban and densely populated areas, and in the form of kitchen gardens to meet the daily needs of the general public in other areas.

The vegetable development programme will also be implemented by dividing it into intensive and regular programmes, similar to the fruit programme. The intensive programme will be launched in the road corridors and in the periphery of urban and densely populated areas. The regular programme will be implemented in other areas.

Intensive vegetable Development programme:

The intensive vegetable development programme will be implemented on a priority basis in areas which have geographical comparative advantage, irrigation system, transport and market facilities and location specific

potentialities. The programme will be implemented on a project basis in the neighborhood of urban and densely populated areas and in the road-corridors of east-west and north-south highways, by selecting the area on the basis of their local potentialities. Special emphasis will be given to develop commercial vegetable farming in these project areas. Market promotion will be carried out under the marketing service programme by marking the information available about the demand for vegetables at various places, and the production as well as the potentiality in different geographical areas. While this will meet the domestic demand, it will also encourage the farmers to grow vegetables in the off-season to meet the demand of the export market. Emphasis will be given on the production of high value low weight varieties of vegetable seeds in the areas deprived of transport facilities. This will, on to other, help in export promotion. The fresh vegetables and vegetable seed producing areas lying in the highway corridors will be the same as those in table 5. the priority areas for fresh vegetable production are given in table 7.

Table 7

1. off-seasonal vegetables	Makawanpur, Nuwakot, Dhading, Kavre, Kathmandu, Bhaktapur
2. Tomato, Bell pepper	Sarlahi, Dhanusha, Mahottari, Dhading, Kavre, Chitawan.
3. Onion	Saptari, siraha, Dhanusha, Mahottari, Sarlahi
4. Water Melon	Dhanusha, Mahottari, Sarlahi

With a view to boosting the vegetable production programme, the following arrangements will be made in the intensive programme implementation areas.

a. Foundation seeds will be supplied to the vegetable seed growers by the government horticultural farms/stations and, the private nurseries will supply necessary seeds and saplings to farmers. Priority will be given to graduate involve the private sector in the supply of such resource seeds. Nursery owners will be trained and developed into vegetable development promotion agents. This will reduce reliance on the government and will lead to stability in local programmes. Fertilizers, insecticides and other inputs required for vegetable farming will be made available through the private sector, the dealers of the agriculture inputs corporation and cooperative societies to the production areas. Besides, arrangements will be made for the supply of agricultural credit through the agricultural development Bank or other commercial banks.

b. Technicians will be made available under the agricultural extension programme of the delivery of extension service relating to the vegetables and vegetable seeds production programmes. In areas covered by horticulture development programme, the technicians of the same programme will provide the required services whereas in other areas, technical services will be provided by the service centres.

c. The programme for vegetable seeds production will be implemented in selected districts. The foundation, hybrid and breeder seeds will be produced in government horticultural farms and stations. Vegetable seeds will be produced by farmers who will be supplied with foundation seeds at the recommendation of the vegetable farming development programme. Arrangements will be made for the purchase of produced seed by the agriculture inputs corporation, private traders or local farmers. Some seed entrepreneurs have been getting their seeds directly from the farmers. Such entrepreneurs will be further encouraged during the plan period. The list of the districts which have been accorded priority for the production of vegetable seeds is given in table 8.

Table 8

Districts to be accorded priority for the
Production of vegetable seeds

Radish	Bhaktapur, Rukum, Dadeldhura, Dhankutta, Tehrathum, Bhojpur, Lalitpur, Kaski, Sarlahi, Mustang.
Cauliflower	Dolpa, Rolpa, Nuwakot, Dhankutta, tehrathum, Bhojpur, Dhanusha.
Cabbage	Mustang
Onion	Rukum, Bhaktapur
Tomato	Sarlahi
Bell Pepper	Rukum, Dhading
Beans and cow pea	Lalitpur, Nuwakot
Water Melon	Dhanusa

General Programme:

The general programme will be implemented in various districts with a view to familiarizing the farmers with vegetable farming in kitchen gardens through publications and other means of communication and to encourage such vegetable farming with the help of local nurseries. By enriching their experience and confidence in vegetable farming through such programmes, the farmers will be attracted towards commercial farming of vegetables. For this purpose, training will be provided to selected private vegetable nursery owners and leaders of farmers' groups.

Potato production programme:

While potato has traditionally been an important food item in the daily food, it has become a major food item in a few districts. Besides, as this crop increases income and employment opportunities of farmers, it has become necessary to promote this crop. Therefore, the potato production programme has the target of expanding potato area from the present 85,000 hectares to 96,000 hectares by the end of the plan. It is estimated the production level will rise from 738,000 m. tons in the base year 1990.91 to 1,033,000 m. tons. During the plan period, the yield level is estimated to increase from 8.68 m. tons per hectare on an average to 10.76 m. tons.

An intensive programme of potato production will be implemented in the irrigated areas and a general programme in the rain-fed areas. While the necessary agricultural inputs for the programme will be made available through the dealers of the agricultural inputs corporation and cooperatives, arrangements will be made for the supply of agricultural credit through the Agriculture Development Bank and other commercial banks. For the supply of seeds, seed grower farmers will be identified and provided with technical support. The private sector will also be encouraged to utilize tissue culture technology for the production of healthy potato seedlings. Potato seeds and seedlings produced by tissue culture will be introduced in the production programme for the Kathmandu valley and other adjoining districts. On the basis of experience gained, this technology will be gradually introduced in other areas.

In order to ensure market for potatoes, programmes will be implemented to organize the producer farmers in groups, to provide them regular information on seasonal prices of potatoes at different places and warehousing techniques, and to encourage for the establishment of potato chips factories and other processing industries in the private sector.

Spice crops programme:

Among spices, the production of turmeric, garlic and red pepper has been important for domestic supply. These low-weight, high-value crops have the potential to increase farmers' income and to promote export trade. Emphasis will be laid on the expansion of area under turmeric and red pepper in order to increase export and farmers' incomes. In the eighth plan, the production targets for these crops have been fixed as follows: increase in the area of turmeric from 1,350 hectares in the first year of the plan (1992/93) to 1,650 hectares by the end of the plan, of garlic from 1,215 hectares to 2,260 hectares and of red pepper from 1,400 hectares to 1,850 hectares. This will lead to production levels of about 8,300 m. tons of turmeric, 9,036 m. tons of garlic and 5,556 m. tons of red pepper by the end of the plan. To attain an increase in the production of spices, an intensive programme will be implemented in the areas assigned to vegetable development programme. In view of the export potential of spices to Tibet, priority will be given to their cultivation in the Kathmandu-Kodari highway corridors.

Among other spice crops, the production of betel leaf and black pepper will be emphasized in some areas of the Terai. Similarly, studies will be conducted under the aegis of the Agricultural Research Council on the feasibility of producing important spice crops like cumin seeds.

Horticultural extension and Training:

Educational programmes and training opportunities etc. will be made available under the agricultural extension services with a view to extending appropriate technologies to farmers engaged in the cultivation of fruits, vegetables and other horticultural crops. Technical services will also be provided from the nearby horticultural farms. Training programmes will be conducted under the central training programme. Conceptual aspects of the training will be imparted to leader farmers in the nearest Regional training centre and the practical training programme will be conducted at the grass roots level, on the farmers' field. By linking horticultural extension with other agricultural enterprises emphasis will be given to an integrated approach to the programme implementation. The extension programme will be implemented by giving special preference to entrepreneurs for commercial farming and the women for fruit or vegetable farming in the kitchen garden.

Field technicians working in each district will be assigned specific work areas. They will be required to maintain up-to-date data of fruit plants planted in their respective areas. They will also be required to conduct regular inspection of a minimum 10 percent of the total areas where fruit sapping have not only in assessing the present situation of fruit tress but also in bringing under the provided of the national data collection the data on fruits and vegetables as a part of agricultural data.

The demand for ornamental flowers and bouquets has been steadily increasing with the growth in hotels, and they have now made a place for themselves in private homes, too. In view of the export potential of ornamental flowers, the private sector will be encouraged to get involved in the production, sale and export of such ornamental flowers. The airlines will be encouraged to provide necessary facilities to exporter for preservation and export of such items at various export points.

Marketing arrangements:

Systematic arrangements will be made for the marketing of horticultural produce in areas where intensive programmes have been implemented. For this purpose, collection centres will be established under the agricultural marketing programme with the participation of farmers' groups. These groups will be supplied with the information about market prices of various fruits and vegetables produced at different places. Similarly, collection and sales centres will be established in urban areas with the involvement of producer groups, cooperatives or private sector. In prominent municipality areas, wholesale markets with cold storage facilities will be established with the participation of producers' groups themselves, cooperatives or private sector. The private sector will be encouraged to develop processing industries. With the co-operation of the central food research laboratory, necessary technical services will be provided for the establishment of processing and preservation centres at the cooperative level or in the private sector. For the transport of fruits produced in remote hilly areas to markets, appropriate technologies pertaining to transportation packaging and preservation will be utilized. In view of the problems of transportation, drying or some other processes of reducing the weight of fruits will be developed and used. Efforts will be made for exporting seeds as in the case of other agricultural products.

Horticultural Research:

Horticultural research works will be conducted through the Nepal agricultural research council. The horticulture programme will provide assistance in the identification of the constraints in the field of horticulture and in research works to be conducted under the aegis of the research council.

Nursery and seed production:

Priority will be given to the involvement of cooperative or private sector in the production and distribution of seeds and saplings of fruits and vegetables. At present there are 380 nurseries established under the private sector in the kingdom. In addition to strengthening these nurseries, additional ones will be established, if necessary, and high quality root-stock seeds, scion and mother fruit saplings will be made available to them from government farms. However, these service will be gradually handed over to he private sector, and the number of government farms will be reduced to the minimum. This is expected to assist the nurseries in producing high quality saplings. Technical services norticultural programme.

If the current data of fruits and vegetable (except of potatoes) as estimated by the respective departments hold their ground when they are refined, the output projections for the eighth plan will be as shown in the table below.

Table 9
Fruits, vegetables and potato production

Area : '000 hectares
Production : 000 m. tons
Yield : m.to/hectare

Crops	Base year 1990/91			1996/97		
	Area	Production	Yield	Area	Production	Yield*
Major Fruits						
Citrus variety	14	86	9.530	20	128	9.820
Others fruits	55	416	9.940	62	507	10.290
Vegetables	141	1075	7.093	141	1278	9.100
Potatoes	84	738	8.680	96	1033	10.760

* Yield level is based on the estimated number of plant under fruiting stage.

Livestock development and animal production programme:

Livestock, which is become an integral part of the agricultural production system has been contributing significantly to the national economy. At the same time, its contribution to the income and employment opportunities for small farmers in the rural sector has also been remarkable.

As this sector was not accorded due priority in the previous plans, it has not been possible to maintain an adequate supply of necessary animal products for the growing population. Besides, owing to the unproductively of animals and their high numbers, this sector has been a factor causing adverse impact on the environment. In the fiscal year 1990/91 the national production levels of various livestock based products were as follows: milk- 865,000 m. tons, eggs-269 million nos. meat-147,000 m. tons and wool – 767 m. tons.

Exceedingly large number of unproductive animals, scarcity of fodder, for lack of adequate animal health services and poor development in the marketing system for animal products have emerged as main constraints to livestock development. Furthermore, the lack of reliable data, and absence of coordination and monitoring, evaluation in the formulation and implementation of plans and programmes have led to lack of realism in plan formulation and the lack of effectiveness in their implementation.

Therefore, in order to meet the demand of the increasing population for animal and poultry products through domestic production and productivity without jeopardizing the environmental balance. In keeping with the objective of generating income and employment opportunities particularly to farmers in the rural sector, the principal targets of livestock development programme and the strategies for achieving them in the eighth plan will be as follows.

1. Livestock production programme:

in keeping with the objective of livestock development programme, the production of milk, eggs, meat and wool has been taken as major programmes. These programmes to be implemented at the farmers' level or as private commercial enterprises are expected to increase the production level of the base year of various commodities by the following additional quantity or numbers within the eighth plan: milk 163,000 m. tons, meat 26,000 m. tons, eggs-110.272 million numbers, and wool – 47 m. tons. a detailed projection has been given in table 10.

Table 10

Output projections of livestock-based commodities

Production programme	Unit	Base year 1990/91	1996/97
a. Milk	'000 m. tons	865	1028
b. eggs	'000 numbers	369,519	479,791
c. meat	'000 m . tons	147	173
d. wool	m. ton	767	814

For achieving the above national targets, depending on the nature of livestock programme, appropriate support activities required for the programme to be launched at the farmers' level will be carried out at the district level and the support programmes for district level technical units will be carried out at the central level. The central and district level units of livestock services will assist in providing the services of subject matter specialist to the production programme. They will also support in the production and distribution of inputs and resources materials.

Thus, the programme will be implemented in three categories: programme for the peri-urban areas, programme of areas with develop road network infrastructure, and programme for areas without transport infrastructure.

Programme for the peri-urban Areas :

In order to divert the urban income to the support of development activities in the rural sector, livestock product processing and distribution programmes will be implemented in the private sector in peri-urban areas. This will help to meet the increasing urban demand for livestock products. In such areas preference will be given to the

production, processing and delivery of milk, eggs and broiler chicken. Programmes will be launched to establish necessary resource centres in the private sector. In this regard, priority will be given to commercial rearing of pure breed livestock. Special attention will be paid to environmental considerations while implementing any programme in the urban sector. Such programmes will be launched in the vicinity of urban areas of the districts of Jhapa, Sunsari, Morang, Suraha, Saptari, Dhanusa, Sarlahi, Mohottari, Makawanpur, Bara, Parsa, Chitawan, Lalitpur, Bhaktapur, Kathmandu, Kaski, Dang, Rupandehi, Surkhet, Kailali, Banke and Kanchanpur.

Areas with Developed Road Infrastructure:

In areas within the radius of one or two days' walking distance from a road head, special programmes for the production and collection of livestock and livestock based commodities will be implemented in order to meet the urban demand. Emphasis will be laid on the production programmes in cow, buffalo, chicken, and goat in such areas. In these areas, the co-operative sector will be mobilized to the maximum extent. Such programmes will be implemented in the districts of udayapur, Sindhuli, Rautahat, Dhading, Gorkha, Sindhupalchowk, Syangja, Tanahu, Nawalparasi, Parbat, Dang, Bardiya, Surkhet, Dadeldhura, Kailali, Dhankutta, Palpa, Gulmi, Kavre, Nuwakot, and Kapilvastu, concentrating on area in the road corridors. In these areas also resource centres.

Areas without Road infrastructure facilities:

Development programmes which utilize the local resources and support the livestock based rural industries will be implemented in these areas. Technical support services will be effectively mobilized so as to provide impetus to the programme. In order to help upgrade the local breeds, improved animals will be made available within the service centre areas at subsidized prices. This subsidy will be for one time only and it will be given for the development in areas outside the radius of one or two days' waking distance from road head point.

Based on feasibility, these programmes will be implemented intensively as models through farmers' group. A general programme will be introduced in area not included in the model programme. The outline of the mode programme will be as follows.

The cattle development programme will be implemented as "A" and "B" models. The 'A' model will possess a minimum of 60 improved cow involving 20 farming families and the total number of cattle including calves will be 120, out of which 40 will always be lactating cows, in every mode for artificial insemination service. Similarly, drenching, vaccination, grass and fodder production, private animal-feed depot, private veterinary store, farmers' training, livestock credit and insurance services will be integrated and implemented intensively.

The 'B' model will consist of about 60 local cows. Breed improvement programme will be implemented on a priority basis in this model. Each model will possess a total of 120 cattle, out of which 30 cow will be lactating. To extend necessary services to the cattle, proper arrangements will be made for improved bull, drenching, vaccination, pastures, grass crops, tree fodder private veterinary store, farmers' training, livestock credit, and insurance etc.

Similarly, the buffalo mode will consist of 40 improved buffaloes, the sheep mode 100 to 300 ewes, pig model 50 pigs, poultry mode 200 chicks, and mule mode 20 to 30 mules. The livestock development models to be implemented in different areas are given in table 11.

Table 11
Number of livestock development models to be implemented in different areas

Programme implementation Area	cattle		Buffaloes	Goat	Sheep	Pig	Poultry	Yak	Mule
	'A'	'B'							
Peri-Urban areas	125	31	276	181	-	57	92	-	-
Areas with Transport Infrastructure	97	46	185	146	27	60	85	7	-
Areas without Transport Infrastructure	37	108	182	167	98	88	60	18	7
Total	259	185	643	494	125	205	237	25	7

2. Livestock Services Programmes:

Livestock Extension:

Under the extension programme, the following activities will be carried out depending upon their feasibility: first aid, parasite control, vaccination, diagnosis, fodder production, silvipasture development, pasture management, production, processing and utilization of agricultural by- products, natural and artificial insemination, training for farmers, livestock fair exhibition, livestock and fodder production competition, agricultural credit disbursement, insurance and market services etc. Accordingly, the targets of the eighth plan relating to livestock distribution, artificial insemination and the establishment of resource centres in the private sector are enumerated in table 12. The above mentioned activities under the livestock extension programme will be carried out as follows:

1. By selecting suitable pocket areas in various districts on the basis of potential, an intensive programme will be implemented as a model through farmers' groups. A general programme will be carried out on other areas by providing breed improvement, animal feed, animal health and other services.
2. Resource centres will be established in the private sector at district level for the production of improved livestock and poultry, as well as grass, and fodder seeds.
3. Breed improvement programme for cows, buffaloes, sheep, goats, pigs and poultry will be undertaken depending upon potential. Similarly, breeds adapted to particular geographical areas will be used in the reproduction of goats, sheep and yaks.
4. In the vicinity of urban areas, production of chicken, duck, pig, and cattle and processing of livestock products will be gradually promoted as commercial activities in the private sector with due attention to environment considerations.
5. In the areas deprived of transport facilities, employment generating production programmes, for instance, the establishment of cottage industries for the production of cheese, ghee coarse woolen carpets, blankets, carpets etc. will be encouraged.
6. Support will be provided to the development of pack animals, depending upon local potential, in order to develop draught power for the agricultural system and transportation of goods.
7. In the urban corridors with transport facilities, marketed production and distribution system will be introduced so as to meet the urban demand for animal products. Priority will be given to the implementation of these programmes through farmers' group and co-operatives.
8. For the upliftment of the rural women and the backward segments of the population, programmes capable of generating direct income in a relatively short period such as goat, poultry and pig rearing will be implemented.
9. Programmes like study and observation tours, livestock fairs, competitions and exhibitions will be launched in order to familiarize farmers with appropriate technology and to develop their skill. Service pertaining to animal fair, competition and exhibition shall be carried out only at the service centre level.
10. In order to coordinate the planning and implementation phases of the livestock development programme, a livestock development implementation sub-committee comprising representatives from related fields such as forestry, soil- conservation, the agriculture development Bank and Women's development programme etc. will be formed prior to the implementation of the programme.
11. For the expansion of the livestock services, service centres and sub-centres will be added and strengthened in the rural sector as per necessity.

Table 12

Details of the District level Programme

Programme	Unit	Targets of the Eighth Plan		
		Total	To be supplied for other livestock farms sources and livestock development programmes	
1. Livestock and poultry Distribution				
- He –buffalo, bull and yak	Number	2,507	470	2,037
- Ram, he-goat, pig	„	31,789	4,686	27,103
- Chicks	„	2335,040	571,000	764,040
2. Artificial Insemination	Number	150,000	150,000	-
3. Establishment of Resource centres in the private sector	Numbers	150	-	150
4. Distribution of fodder sapling through forest nurseries	000' numbers	6769	-	6769

Animal Health:

Under the animal health programme, implementation of various epidemiological programmes including preventive and curative services against disease infestation which will need national considerations will be implemented and co-ordinated from the central level as and when necessary. Similarly, the animal health programme of the livestock extension service to be carried out at the district level will be coordinated. Animal health services will be provided at the district level under the extension programme. Under this programme, while three regional diagnostic laboratories will be added, a diagnostic centre for the fowl and a vaccine quality control unit will also be established. Different activities pertaining to the implementation of animal health programme will be conducted as follows:

1. By making arrangements for producing the vaccines for infectious diseases within the country, the production capacity will be gradually augmented and the quality standards improved. Under this programme, 8.3 million vaccines for Haemorrhagic septaemia, 2 million for Black quarter, 65,000 for Anthrax, 1 ml for Rinder pest, 25.5 million for new castle disease and 8 million for chicken pox will be produced and made available. The rabies control project will produce 1,75,00 ml. of phenolized and 2,250,000 ml. of B.P.L. Rabies Vaccine. The feasibility of initiating the production of veterinary medicines in the private sector and limiting the role of the government to the maintenance of quality standards will be assessed.
2. In view of the growing demand for animal health services, encouragement will be provided to the private sector to establish veterinary hospitals on the basis of electoral constituencies.
3. In order to prevent the import of diseases from other countries, quarantine services will be implemented after reviewing the situation of the quarantine check posts.
4. By providing proper incentives to the rural animal health workers, they will be effectively mobilized to make the animal health service easily accessible to the rural sector. By monitoring the work of health workers trained thus far, priority will be given to providing refresher training courses for activating them.
5. Arrangements will be made for providing veterinary pharmaceutical supply and veterinary services for pet animals in the urban areas by the private sector.
6. Necessary arrangement will be made for the formulation and implementation of programmes for the control of important diseases that may have an impact in public health in the national perspective. Accordingly, priority will be given to conduct relevant studies for the formulation and implementation of programmes for the establishment of animal slaughter house.

Improved Livestock production and Breeding:

The production of improved breeds required for increased animal production and for the supply of resource breeds to the breeders of the private sector will be carried out under the livestock breeding services programme. Under this programme, 1,571,000 chicks; 216 yak bulls; 3,360 piglets, 241 he-goats; 1,085 rams; 175 bulls and 79 buffalo bulls will be produced and distributed from government farms within the plan period. During the plan, 230,000 litres of liquid nitrogen and 70,000 doses of bull semen also will be produced under the artificial

insemination programme. The following will constitute the basis for the implementation of this improved livestock production and breeding service programme.

1. Besides strengthening the existing essential farms, support will be extended to the resource centres of the private sector by producing the grass seeds, chicks, yak bulls, pigs, he-goats, she-goats, rams, ewes, bulls, cows, buffalo bulls, buffalo heifers etc. in those farms. Other farms will be handed over to the private sector. The production and distribution of fodder saplings from local nurseries under the forestry development programme will be adequately coordinated.
2. In order to gradually transfer the resource breed production programme to the private sector, the government will confine itself to the production of parental stock. The programme will be geared towards involving the private sector in due course in the production of parental stock, too.
3. The programme of artificial insemination in cows and beffaloes will be extended and expanded based on potential to the areas with access to transport facilities. The participation of the private sector in this activity will also be encouraged.
4. in areas where artificial insemination becomes impossible for the lack of physical facilities, natural brooding service programme will be implemented by distributing stock-breed males to resource centres.
5. Resource centress of improved breed livestock and poultry will be gradually established and promoted with the assistance of financial institutions in the urban areas and areas with transport facilities. Necessary technical services for this purpose will be provided under the programme.
6. a nuclear herd will be maintained in the government farms to support the resource centres established in the private sector, with the objective of producing appropriate and essential breeds in keeping with the national perspective, and producing livestock and poultry of desirable breeding standards. The private sector also will be encouraged in this activity.
7. In order to extend and intensify the breeding services, artificial insemination programme and same banks will be strengthened. At the same time, the private sector will also be motivated to participate in the production of liquid nitrogen.
8. Studies will be conducted on the establishment of poultry parental stock production units in the private sector or with the joint investment of foreign companies and a relevant programme will be implemented accordingly.

Animal feed:

Under the animal feed programme, activities such as the production of fodder and improved grass, management of feeds, pasture and range management and the promotion of nutritious feed will be carried out.

Under the programme, based on potential, new pastures will be opened with farmers participation and existing pastures will be improved in 10 districts in the northern region. In the lower regions, necessary activities will be undertaken for the development of silvipature and the plantation of fodder tree and grasses. Furthermore, the pasture management, grass production and other livestock fodder production programmes to be implemented under livestock fodder production programmes to be implemented under the animal feed-programme at the district will be properly coordinated and supported with technical services. Other arrangements pertaining to animal feed programme will be as follows:

1. The range land and green pastures will be identified and made available to users on long-term lease in order to effectively implement the pastures and development programme without causing any adverse effect on the environment.
2. Besides introducing leguminous-grass crops in the crop cycle, the farmers will be encouraged to plant perennial grass on the terrace-ridges and boundaries for augmenting the supply of animal feed resources. At the same time, the use of various crop by – ridges and boundaries for augmenting the supply of animal feed resources. At the same time, the use of various crop by –products will be encouraged in animal feed component.

3. The production of grass and fodders of multiple uses will be encouraged in co-ordination with the forestry sector. The programme pertaining to the production and destruction of fodder saplings will be linked up with forest nursery programme. The livestock service programme will produce the fodder saplings only in those areas.
4. Farmers will be encouraged in the production of grass seed and seedlings. The services relation to the supply of farmers' foundation seeds and other technology will be provided through government farms. The participation of private sector will also be encouraged in this regard.
5. Emphasis will be laid on the establishment of feed industries in the private sector. Moreover, a programme will be implemented in coordination with the central food research laboratory for determining and controlling quality standards of feeds.
6. While the development board for animal feed production has been engaged in the commercial production of animal feed at present, priority will be given to the production of minerals, bon meal, and meat meal etc. in order to of minerals, bon meal, and meat meal etc. in order to help the smalls scale, private production of animal feeds in the rural sector. The feasibility of operating this development board for Animal feed production in the private sector will be explored.
7. Arrangements will be made for the establishment of animal feed laboratory as well as rhizobium production laboratory in order to support the animal feed programme.

Marketing Management:

In order to promote the production and distribution of livestock and livestock products in a spontaneous manner, marketing management programmes will be implemented as under.

1. The areas with easy access to transport facilities will be brought under the national milk grid system in order to provide necessary market to the milk and milk products of those areas. The cooperative, private dairies and government undertakings will be involved to the greatest possible extent to make the grid system effective. Possible extent to make the grid system effective. Remunerative prices will be provided for milk and milk products in order to encourage a maximum flow if these products into the market.
2. Accordingly, the dairy development programmes will be conducted as follows.
 - a. The programmes of the Dairy Development Corporation will be expanded on the basis of cost effectiveness involved in commercial activities.
 - b. The dairy Development board will be mobilized as an agency that will make policy recommendations to dairy development programme in the national level on the formulation, implementation, monitoring,
 - c. the level of milk collection through six milk supply schemes under the Dairy Development Corporation will be raised to 44.9 million litres by the final year of the plan. Similarly, by the end of the plan, the production and supply level of the processed milk will be increased to 52.350 million litres and the production level of cheese and butter will be reised upto 268 and 1021 m.t. respectively. Thus, compared to the base year figure, there will be an increase of 27.3 million litres in the production of processed milk, 586 m. tons in butter within the plan period.
 - d. For the supply of the skimmed milk power. A factory of a daily production capacity of 3.5 m. tons will be established at Biratnager within the plan period. Furthermore, a feasibility study will be conducted on the establishment of a similar factory in the mid-western region.
 - e. Processed milk will be produced and distributed at Butwal and Kohalpur by establishing new milk processing plants.
 - f. In order to further expand the collection system and to increase the participation of farmes, additional 829 milk producers' associations will be established in 28 districts. Similarly, 57 chilling centres will be set up in 28 districts.
 - g. A cold store of 50, 000 ligre capacity will be established under the Kathmandu milk supply scheme in order to meet the demand for milk in the Kathmandu valley.

h. Apart from augmenting the capacity of cheese factories operating under the corporation, emphasis will be given on the establishment of additional cheese factories in the districts of Ilam, Panchthar, Dolakha, Dolpa and Magdi. Priority will be given to private and cooperative sectors in expansion of the capacity of the existing ones. Any extension/establishment work under the Dairy Development Corporation, if required, will be undertaken only on the basis of cost effectiveness.

i. Based on feasibility studies, the milk producers' Associations will be gradually involved in the ownership of the milk supply schemes operating under the Dairy Development Corporation.

3. Livestock haat-bazaars (rural Markets) will be organized at the local initiative in coordination with marketing services programme at appropriate places. This programme will help achieve a balance between the demand and supply of livestock and poultry.

4. Besides developing small and healthy model slaughter houses, the private sector will be encouraged for the establishment of commercial and scientific slaughter house in the urban areas in order to promote clean meat production, processing, collection and distribution system. To strengthen the livestock collection and distribution system, the co-operative programme of market services and livestock services will be implemented in order to involve the private sector in the task of market development to the greatest extent. The poultry producers' Association will be actively mobilized in the production, preservation and distribution of poultry eggs and in the monitoring of the quality standards of feeds.

5. Necessary credit, insurance and technical support service will be extended through relevant programme units for the establishment and promotion of industries pertaining to livestock and poultry production in the private sector and for the creation of market for them.

1. Training:

Training programmes will be conducted in the following manner for the skill development of farmers and agricultural-workers, necessary for the implementation of the livestock service programme.

1. The training for the production of middle level manpower required for livestock development services will be conducted within the framework of the central training centre in coordination with the Tribhuvan University.

2. As for the training of animal health workers and group leader-farmers, the technical aspects will be conducted in the regional training centres and the practical training will be implemented on the farmer's homestead and animal sheds. Private and non-government organizations will also be involved in the task of conducting such training courses.

Fish production programme:

Fish contributed significantly to the total supply of animal protein. Fishery also makes an important contribution to the income and employment generation for farmers. By Utilizing available natural lakes and by digging new ponds, the fishery development programme will be implemented on the basis of the past experiences with regard to its estimated to have been 14,471 m. tons. During the eighth plan, the total production will be raised to 22,311 m. tons, increasing the production level by an average annual growth rate of 10 percent.

The programmes will be implemented in the following manner for achieving the above mentioned target.

a. At present nearly 76 percent of the supply of fingerlings is being done by the private sector producers and this supply level will be increased to 83 percent by the end of the plan period. Technical service and credit facilities required for this will be provided through the fishery development programme. The private sector will be encouraged in the production of ducklings, too. As the fingerling distribution is a major means of increasing fish production, the level of fingerling distribution of 48 million 651 thousand in the first year of the plan will be increased to 59 million 857 thousand in the final year.

b. The fish production programme will be implemented as an intensive programme in the areas where scientific management systems can be used in fishing, as a semi intensive one, where production may be achieved through the use of fingerlings and fertilizers, and as a general programme in areas where production can be made through the distribution of fingerlings only.

- c. The nurseries and hatcheries operating in the private sector at present will be utilized to their fullest capacity. For this, the technical services to be made available from the government will be made more effective.
- d. Necessary information will be provided to nurseries and hatcheries about the market and sales-promotion of the hatched fingerlings.
- e. Necessary rules will be made on the basis of existing legal provisions to discourage fishing (concerning the conservation of aquatic life) with the use of poison in natural waters. These rules will be enforced effectively.
- f. At present, the water-cess on the utilization of water for fishery often exceeds the same for food crops. The water-cess system will, therefore, be made uniform.
- g. The marginal land areas such as public stagnant pools, ponds, damp and marshy land, and swamps will be provided on lease for fishery activities to small, marginal farmers on a priority basis.
- h. A fishery programme for the production of fish in paddy fields will be launched in some feasible districts of the middle hilly region and the Terai. At the same time, in the valleys and other feasible areas in the middle hilly region, a general programme will be implemented for fish production.
- i. A feasibility study will be conducted on the production technology in lakes and cages for the production of expensive varieties of fish which is in great demand among hotels. Furthermore, the technology of fish farming in cages and enclosures used in Pokhara will be gradually extended to other feasible lakes and reservoirs.
- j. When dams are constructed for various purposes in natural lakes, the concerned agency will be required to erect appropriate ladders along the dam to facilitate the conveyance of the local fish.
- k. As fish is a highly perishable commodity, it requires to be supplied to the market within a limited period of time. Therefore, special emphasis will be laid on the establishment of wholesale fish market in prominent market places, equipped with cold storage facility. The private sector will be provided with necessary credit and technical assistance to establish such cold stores. Besides, the use of post harvest technology will be emphasized in the private sector in order to ensure the availability of fish in the market.
- l. With the objective of gradually transferring the duckling production and distribution programme from the government farms to the private sector, private breeders will be developed in all feasible areas.
- m. The production targets of the fishery development programme during the plan period will be as follows.

Table 13
Fish Production

(in metric tons)

S.No.	Particular	Base year (1988/89-1999/01)		1996/97	
		Production	Productivity	Production	Productivity
1.	Pond fish production	7162	1.57	12552	2.40
1.1	Regular programme			2273	1.40
1.2	Sub-intensive programme			6063	2.50
1.3	Intensive programme			4216	3.40
2.	Paddy-field fish Production	12	0.21	125	0.38
3	Lake Enclosure culture	24	2.00	45	3.00
4.	Other reservoirs	12	0.40	172	0.63
5.	Lake cage culture	54	3.00	150	6.52
6.	Improved fry in lakes	35		100	
7.	By-products of Govt. Farms and centres	76		134	
8.	Natural water reservoirs	5281		9033	
Total	Production	12656		22311	

B. Support service programmes:

Agricultural Extension Service:

In order to increase agricultural production, it is necessary to make available to the farmers the improved agricultural technologies recommended by research. Whoever, recommended technologies can be disseminated and adopted by farmers only if these technologies are of problem solving nature. At the same time, it will be necessary to develop a two way information process for making the technology and its extension more practicable by transferring technology recommended by research to the farmer and by providing feed back to research on the adoption of the technology and any new problems.

In the past, different methodologies were used for the dissemination of technology and each methodology had its own characteristic features. However, no methodology was found sufficiently effective for a comprehensive extension system. Some were ineffective, whereas others were unsustainable. Therefore, on the basis of these experiences, his majesty's government has adopted a strategy of selecting farmers' groups by transforming of service centres to local technology extension centres. The selected farmers' groups will be trained and develop into contact groups for the introduction of technology in the rural sector and for strengthening the technology adoption processes of farmers under constant monitoring by JT/JTA's . it is with this background that in the Eighth plan period the agricultural extension service will be conducted in the following manner.

a. In order to make the technology extension work more practicable, the extension services of deferent agricultural agencies will be brought under a single administrative unit and the extension programme will be implemented in an integrated manner. This arrangement will lead to a considerable decrease in the administrative expenditure being incurred in diverse activities.

b. Farmers groups (each of 20/25 persons) will be organized according to their choice and these groups will be mobilized as the nucleus ofr technology extension work. In order to assist the J.T.A's in the extension of technology in the rural sector, the group leader farmers will be provided with training and technical services. Subsequently, they will be mobilized to extend necessary services and facilities to the farmers. These groups will be broth in contact with subject matter experts through J.T./J.T.A's on a regular basis and as and when necessary. This arrangement will thus enhance the participation of local farmers in the extension programme and, in turn, will make it more effective as well as less expensive.

c. In view of the fact that the demonstration can be extremely reliable and convincing besides farmers' training and technical guidance services, the farm of a group will be used as a demonstration plot. Compensation will be paid for any harm or damage that may be caused in the course of demonstrating a technology or providing technical services during the model demonstration.

d. By providing technical services at every service centre, farmers will be gradually developed, based on potential, as breeders, improved seeds grow sapling producers.

e. Extension programmes will be implemented in accordance with the implementation arrangements mentioned in the respective chapters on food-crop[s, cash and industrial crops, fruits and vegetable, fishery and livestock based commodity programmes.

f. Increased use of audio visual materials will be made in order to incorporate into the mass communication system the information on agricultural marketing and prices, soil conservation and fertilizers, fruit seeds, saplings and plants, and the breeding technology for improved livestock and poultry.

g. With a view to increasing women's participation in agricultural development, special priority will be given to the task of organizing women's group in the course of implementing programmes related to production activities. The participation of women's groups will be specially emphasized in those activities which may be undertaken in the household yards such as kitchen-gardening, poultry rearing, goat-keeping, mushroom production, silk production, development of nurseries and beekeeping etc.

h. In order to ensure reliable supply of agricultural inputs and services the service centres will be further strengthened and made more efficient. Simultaneously, new additional service centres will be established as necessary.

i. Support will be extended to the agricultural research council to undertake out-reach research work with a view to rendering more reliability to the extension techniques.

j. Proper coordination and effectiveness will be induced into the implementation of the programme through the district agricultural development coordination committee comprising the chiefs of all agencies associated with the implementation of agricultural development programme in the district.

k. Other production service related to agricultural extension programme, which need to be extended to the farmers in an integrated way, will be mobilized in the following manner.

Seeds and seed technology services:

Healthy and highly productive seeds contribute immensely to the growth in productions. Until recently the agricultural centers and farms were the main supply sources for source-seeds and improved seeds. The agriculture inputs corporation has been selling improved seeds of some foodgrain crops with farmers' participation under the seed multiplication programme. But such supply of improved seeds accounts for merely 2 percent of the total demand. However, a particular improved variety of seeds no longer retains its improved quality after 3 or 4 years of successive use. Therefore, in order to attain a change of seeds, 25 percent of the total quantity of seeds to be used annually needs to be changed every year. In view of the necessity of changing the improved seeds, the institutional sale of such seeds amounts to only 5 or 6 percent of the total requirement even if the entire sale is presumed to be used in the change of seeds. therefore, it is essential not only to expand the supply of improved seeds but also to assure the farmers about their quality. In order to increase its effectiveness, the seed programme will, therefore, be implemented in the following manner.

a. Emphasis will be laid on developing seed producer farmers at the local level in order to intensify the use of certified seeds among farmers. To attain local self-sufficiency in the supply of seeds, the seed production programme will mainly be implemented for food crops in the hilly areas without transport facilities. The seed the plan period by fully involving the leader-farmers, cooperatives and private entrepreneur in the activities of producing, processing and distributing the seeds of all kinds of crops.

b. Easy and convenient access to credit facilities will be ensured to the private sector to engage in the seeds trade. Seed producers will also be encouraged to be involved in the export of seed.

c. Support will be extended to the development of the seed industry by making appropriate arrangements for the private sector to utilize the government sector facilities relating to seed processing, warehousing, seed testing and certification.

d. In coordination with research farms, the Agriculture Inputs corporation will provide source seeds to producer farmers to produce seeds of improved variety. However, by gradually involving the private sector in this activity, attempts will be made to handover the source seed production to the private sector by the end of the plan period.

e. All service oriented programmes relating to seed technology and development programme other than the research oriented ones, presently falling under the purview of the agricultural research council, will be linked up with agricultural extension programme of the department of agricultural. Training opportunities will be provided to seed producers. Seed certification of services will be made available by inspecting the seed crops and testing their quality standards. At the same time, farmers will be assured of seed quality. For this purpose, arrangements will be made for an unambiguous declaration of trade mark labels of necessary characteristics of marketable seeds on their packets and monitoring of the quality standards will be undertaken through sample-testing of seed packets on a regular basis.

f. As the subsidy system has deterred the growth of competitiveness in the private sector, the government subsidy on sales priced seeds will be discontinued. Instead, the seed entrepreneurs in the private sector will timely supply of seeds. However, in order to encourage the source seeds will be made available under the agricultural programme as an one time support of demonstration at new places.

Pest protection Services:

A large quantity of food products is being lost annually in pre and post harvest activities by insects, diseases, rats, birds, weeds, threshing, drying, storage and processing. It is estimated that nearly 15-20 percent of foodgrain is lost in these activities. Besides this, there occurs at times an epidemic situation at different places. If only this loss could be reduced, there would be a considerable increase in the availability of foodgrains, which could contribute significantly to food security. By encouraging the private sector in the production and utilization of small manual tools and equipment for use in plant protection services, increased employment can be generated in the rural sector. At the same time, it has become necessary to instill quality into plant protection services as a wise and judicious use of dangerous pesticides used in controlling harmful diseases, insects, rats and weeds can have a positive impact on the environment and public health. Taking into consideration these realities, during the eighth plan the plant protection service programme will be conducted as follows.

- a. An effective surveillance system will be established to survey and study the life cycle of insects and diseases affecting crops like foodgrains, cash crops, vegetables, fruits and oil seeds and to undertake necessary actions.
- b. In order to prevent the misuse of pesticides in view of their possible impact on the nation's environment and public health, this programme will be responsible to provide clear-cut guidelines at the national level for registration, licensing, determination/testing of quality standards, judicious use and regular disposal techniques of agricultural pesticides produced in or imported into Nepal. For this purpose, necessary reforms will be brought about in the act relating to pest management.
- c. The use of pest management techniques which do not cause any adverse impact on the environment will be promoted through various media of communication and publicity. Both the user farmers and private sector traders will be encouraged to adopt them.
- d. In order to reduce the loss of food-grains, vegetable and fruits in post harvest activities, the use of various technologies relating to improved storage system, packaging techniques, utilization of manual tools and equipment, improved warehousing, and control of birds, rats, insects and mould etc. will be promoted through training and communication and publicity media.
- e. In order to provide plant protection services to farmers at the local level, field stations will be set up in appropriate places. Effective services will be made available by making arrangements for the services of trained manpower. Technical supervision and monitoring will be conducted through central and regional laboratories.

Soil Analysis and management services:

Continuous cropping causes a decline in the fertility of the soil giving rise to an adverse impact on production. The quantity of different sources of soil nutrition such as organic, chemical and biological fertilizers required for the supply of nutrients to analysis. It is necessary to introduce soil management services at the farmers level in order to sustain the fertility of the soil through improvements in the quality of the soil. Therefore, the soil management service will be implemented as follows.

- a. In order to provide efficient soil analysis services, the soil analysis units located at various places will be strengthened and the service will be extended to farmers in an integrated manner.
- b. The soil analysis service will be extended by assembling all physical facilities developed to date for soil analysis under the department of Agricultural development. These facilities will also be made available for agricultural research work as and when required. Services will be extended to the districts not lying within the scope of the existing laboratories through the arrangement of soil testing kits for analyzing soil samples.
- c. In view of the possible negative impact of the excessive use of chemical fertilizers on the soil, the quantity of fertilizers to be used will be recommended with due consideration for soil treatment and environmental protection. Organic fertilizers will be encouraged to substitute for the expensive imported fertilizers. The government farms will have to set an example in the use of organic fertilizers. By chemical fertilizers so far, emphasis will be laid on protecting such areas for increased production; reducing the use of expensive, external agricultural inputs; promoting crop farming based on natural and organic fertilizers; and arranging the publicity of such activity through extensive information services. The participation of non-governmental organizations will be encouraged in these activities.
- d. To preserve the inherent nutrients of locally available organic fertilizers, the farmers will be trained in the appropriate technology of preparing compost fertilizers in a scientific manner and using them in good time before they lose their nutrients.
- e. Farmers will be encouraged to enhance the fertility of soil through the production and use of green manure in irrigated areas with optimum temperature. With a view to preserving the soil fertility, farmers will be motivated towards participating in the tasks of soil conservation and maintenance activities in the watersheds as possible safeguards to soil erosion or sedimentation through floods and landslides.
- f. Farmers will be inspired to achieve greater production by enriching the quality of the soil through the use of leguminous and other crops that fix atmospheric nitrogen. Appropriate farming systems and harvesting techniques of such crops will be publicized among farmers.

Agricultural Communication Services:

The objectives of the agricultural communication service will be to extend support to the growth of agricultural production and the promotion of market for agricultural products through the effective flow of information to agricultural-workers, farmers and agricultural entrepreneurs. The programme will aim at dissemination information on agricultural technologies developed through agricultural research, market information for agricultural products, and agricultural policies etc. the programme will be implemented as follows.

a. Timely strategies and guidelines will be formulated with regard to agricultural communication and an agricultural communication coordination committee will be established and activated. This committee will be represented by different concerned agencies and it will implementer agricultural communication service in a more efficient and coordinated manner.

b. By assigning the responsibility of communication to the divisional chief at the centre, asst. agricultural information officer at the regional level and a technical assistant at the district level, the publicity work will be undertaken by collecting and exchanging information at various levels. To ensure a proper use of publicity materials to e supplied by the centre, their distribution will be made through local service centres.

c. Developing publicity materials oriented towards the target groups of the agricultural programme, the information dissemination service will be provided through the preass, visual aids, video films and radio transmission. The communication programme will provide necessary technological assistance to any agency or project which requires a production of any publication and training materials of a specific nature.

d. Arrangements will be made to maintain under the communication programme a studio and other equipment required for the production of publicity materials. Other communication media equipment such as projectors will be kept in the department, projects and training cetres.

e. Taking into consideration the fundamental assumptions used in the formulation of plans pertaining to agricultural and forestry resources, diversification will be introduced into agricultural information materials. The agricultural communication service has so far been primarily limited to providing technical information on production. Now, the following aspects will also be incorporated, in addition to others, into the communication service in the course of its diversification in the eighth plan.

- Efforts to increase farmers' participation in the implementation of a programme or a project by providing them with the information about the agricultural programmes and projects, their implementation policies, and the subsequent services and facilities to be available to them.

- Gradual increase in the publicity of region specific and local technology and other useful agricultural information through radio transmission.

- Market promotion of special agricultural products (e.g. coffee, silk, apple, sweet orange, walnut) and the flow of information that may help in establishing contact between farmers and agro-entrepreneurs/traders.

- Search for small and marginal farmers who have adopted any successful agricultural activities for self-employment and a radio broadcast of interview with such farmers as a motivation to other target groups.

- Information which raises awareness about stability in agricultural development through comparative advantages and the protection of other sectors closely associated with proper land use and farming systems.

Agricultural Education and Training services:

Human resource is a primary factor among many other factors of agricultural production and productivity increase. In a country like ours which has a large segment of small and deprived farmers, agricultural development can forge ahead at an accelerated pace only if this vast increased skill and efficiency in agricultural production and in locally suitable agro-based industries. In the perspective of the above mentioned facts, the agricultural education and training programme will am at -

- Helping the majority of farmers, agro- entrepreneurs, traders and other sections of manpower engaged in agricultural to become aware and capable of identifying their own constraints, seeking solutions, solving problems and exploring new opportunities in their respective fields.

- Contributing to the enhancement of performance and efficiency of available natural and human resources for maximum benefits through the promotion of entrepreneurship in agriculture.
- Helping in the expansion and involvement of cooperatives and private sector in agriculture.
- Contributing to the increase in work efficiency of all government, cooperative and private sector agencies engaged in agricultural development, and
- Performing the role of a bridge among the farmers, agro-entrepreneurs/traders, agricultural research, agricultural extension and other allied programmes.

To attain these objectives, the education and training programme will be launched as follows.

a. The tradition of one-way flow of information in training courses will be changed and the agricultural training will be linked with potentials associated with farmers' problems and resource endowments. Thus, the training programmes will be made more farmer oriented and developed gradually into a medium of acquiring practical expedience.

b. The agricultural training programme will be based on the concepts of currently introduced market-oriented economy and social justice. The deprived farmers will be assembled into several appropriate groups and they will be imparted training by selecting group representatives. An appropriate training system will be gradually developed to train the commercial farmers and agro-entrepreneurs in planning their agricultural projects in accordance with their investment capabilities as well also be encouraged to participate in this activity.

c. In the agricultural training, the participants will be organized in appropriate groups in order to make their training productive and employment-oriented in keeping with the means and resources of farmers and agricultural entrepreneurs. The programme will be based on the realities and specific needs of the locality. Training will be conducted in homogenous groups, formed after the identification of the needs of trainees. The needs will be assessed on the basis of the trainees' economic condition and subject area, the accessibility of the area (city, town, remote area etc.) to the market, and category of the area in terms of agro-ecological situation. The courses of study will be revised accordingly for the training programme. While making this revision, due attention will be paid to the objectives of the training programme, the necessity of diversification and forestry resource development.

d. The farmers will be organized in groups for training purposes with a view to developing the same groups into contact units. Organizing short-term regular training courses for leader farmers selected from various groups, they will be gradually developed as rural-sector agricultural leaders by enhancing their skill in one or more than one subjects. As for the training of other group members, it will be imparted by the training of other group members, it will be imparted by the leader farmers. These leader farmers will eventually develop into village level technology extension lamps and meeting the increased need of rural agricultural-workers through these farmers, a gradual reduction will be achieved in government expenditure.

e. Every training programme will comprise women participants. In a training programme in some subjects which may absorb many women participants, preference will be given to them. While conducting such training programme, it will be geared towards to the needs of the women folk. In the context of our socio-economic situation which does not permit the women farmers to step out of their household, experiments will be made with regard to arranging mobile training in their neighborhood and such programme will be further extended depending upon its suitability and effectiveness.

f. In conducting training for agricultural technicians, they will be trained, besides providing knowledge of the relevant subjects, in teaching techniques, communication techniques and management techniques with a view to developing them into capable instructors and training organizers.

g. The primary basis for the formulation of the training programme will be the needs and aspirations of the target group and the use of new technology and knowledge suitable to them. The training programme for agricultural technicians will be finalized according to the needs of the concerned offices of their employment. The task of identifying such training needs will be performed by the concerned training needs will be performed by the concerned training needs will be performed by the concerned training institution in collaboration with the concerned office.

h. For the implementation of training programmes, there will be at the centre, an integrated central training centre for all sub-sectors of agriculture. In several geographical sub-regions, a smallest possible number of regional training centres will be maintained under the central training centres as necessary. The instructors' training, specific subject matter specific training and officer-level technical training will be conducted at the central level. As for the whole training of middle level technicians and the training of leader-farmers of farmers' groups the conceptual and technical aspects will be conducted at the regional training centres whereas the farmers' homestead and farm land will be used as the training grounds for the conduction of practical training requiring experimentation. This part of the training will be conducted through the technicians of the local service centres.

i. High level manpower will be produced by maintaining coordination with the institute of agriculture and animal science and foreign scholarships. As mentioned elsewhere above in the chapter on policy management of agricultural development, a feasibility study will be conducted in the establishment of an agricultural manpower inside the country. In conducting such study, ministry of education and the Tribhuvan University.

Agricultural marketing and price Management services:

As the agricultural development efforts in the past mainly focused on production growth, adequate attention was not paid to the gainful utilization of the production. As a result, there emerged distortions in agricultural development. For the lack of proper incentive of market facilities to producers, the rate of growth in production not only remained slow but also became quite disappointing. While, on one hand, the production at places could not find market, there was, on the other, a shortage of agricultural products at the places of demand. Therefore, it is necessary from this eighth plan onwards to make gainful utilization of production and the maximum utilization of production potentials afforded by geographical diversity in order to raise the standard of living of the people. For this purpose, effective management of agricultural marketing and prices is required for providing support to the economic development of the nation.

Against the given background, the agricultural marketing and price management programme will be conducted as enumerated below with the objective of:

- Providing necessary infrastructure services for the creation of an environment where the agriculture marketing can be conducted in a complete manner;
- Providing reasonable prices to the producers and making the agricultural products easily accessible to consumers;
- promoting a strong and expanded market through the mobilization of government undertakings, cooperatives and private sector in a competitive as well as complementary manner to ensure an easy flow of commodities from the production to the area of consumption;
- Making the distribution system self-directed and efficient;
- Promoting the export of some selected agricultural products and developing import substitutes;
- Encouraging agricultural entrepreneurs to export traditional goods with value added and mobilizing properly the supply of exportable items;
- Providing encouragement to such production activities which can better utilize the market induced opportunities for making the agricultural development a self-directed continuous process; and
- Developing the marketing and pricing system for the promotion of agricultural marketing on the whole by maintaining a balance between production surplus and deficit occurring at different places at different times.

a. in order to bring the wholesale transaction of agricultural products out of its present narrow confines and make it open and more competitive, priority will be given to the establishment of agricultural whole sale market places in the cooperative and private sector in rural as well as urban areas. In places of importance from a national point of view but lacking in co-operative or private sector initiative, agricultural wholesale market places will be developed with local participation and the coordination of agricultural marketing programme. Arrangements will be made for their proper operation by involving the local authority and private sector. The donor agencies, banks and other non-governmental organizations will be inspired to mobilize their resources for the development of physical infrastructure in such areas. In addition to making necessary legal provisions for the

development of such markets at local and regional levels, necessary technical services will be provided to local authorities for the same. In the urban sector, these programmes will be implemented at the initiative of the marketing programme in coordination with the ministry of housing and physical planning.

b. Necessary technical support services will be provided to the local initiative in establishing new rural markets and expanding and better organizing the rural haat- bazaar and other markets initiated by local people on the Terai as well the hills. Developing some of these bazaars into collection centres and linking them with agricultural whole sale markets, their management will be entrusted to the local producers' groups on a priority basis. Necessary support services will be extended to local traders too.

c. In the areas lacking particularly in the transport and marketing infrastructure development, the transaction of commercial products will be encouraged by organizing the producer farmers into groups or in commodity-specific cooperative associations. Necessary legal provisions also will be made to enable such organized producer groups to buy or sell their products on a contract basis.

d. The retail sales of agricultural products will be made more competitive. In order to ensure a brisk, well organized retail sale of perishable agricultural products such as fish and horticultural and livestock products in their healthy state, encouragement will be provided to a larger number of retailers to engage in their sales. For this purpose, the marketing programme will provide necessary technical support services, make available market information from various areas and conduct financial resources. Necessary arrangements will also be made for the creation of a legal and policy-based infrastructure.

e. In the urban sector, the co-operative concept will be instilled among the consumers by associations. The cooperative sector will be motivated to engage itself in the sale of agricultural products, particularly in the sale of horticultural and livestock commodities.

f. In order to relieve the farmers from the anxiety of probable low prices for their products, a minimum support-price for major food and cash crops will be fixed before their cultivation. In order to effectively translate the support price into practice at different places and times as necessary, appropriate arrangements will be made including the provision of institutional purchase from agro-based industries, co-operatives, and private as well as government sector.

g. Upon conducting research in the techniques of picking, drying, grading and packaging of the produced agricultural crops, necessary support will be extended to ensure better prices and to reduce loss by providing information on the use of appropriate technology.

h. An agricultural price commission will be established to provide counseling services to his majesty's government in the formulation of appropriate price policies. The commission will conduct market surveillance of the production cost and extend technical services and counsel in the implementation of the policies. This will lead to the establishment of a convention this will lead to establishment of a convention of fixing suitable prices as a price- incentive to the farmers. In order to prevent the pressure of undesirable influences on the prices of agricultural products, the expenditures arising out of non-pricing factors at various stages from production to marketing will be considerably minimized. Special emphasis will be given on the use of cost effective techniques of production, transport, storage and processing etc.

i. Appropriate technologies will be developed through research into the practical aspects of post-harvest use of agricultural products, and the farmers, traders, entrepreneurs and cooperatives will be encouraged to use them. For this purpose, apart from conducting an agricultural market communication service in coordination with agricultural communication programme, necessary legal provisions will also be created.

j. A programme will be implemented to provide training to the farmers, traders and agro-entrepreneurs in agricultural marketing management and the use of post harvest technologies.

k. Free and open internal movement of agricultural products will be ensured. Upon the analysis of the existing legal provisions, necessary arrangements will be made for developing appropriate policies and legal infrastructure for this.

l. With a view to making the agricultural marketing and pricing system free, competitive and sustainable, such agricultural market information service programmes will be framed and implemented which will perform the tasks of continuous collection, documentation, monitoring and evaluation of the agricultural market information.

m. The information on external markets and of the market prices prevailing at different places in the kingdom will be publicized through the mass communication as well as local publicity media, particularly on the areas that have been heavily emphasized by production programmes.

n. A market intelligence system will be established for continued identification of market-led opportunities. At the same time, necessary policies and other facilities will be gradually developed for the identification, establishment and expansion of agro-based industries capable of promoting export and producing import substitutes.

o. Depending upon feasibility, encouragement will be provided to the establishment and operation of cold storage facilities of optimum capacity in the private and cooperative sectors. Preference will be given to the establishment of such cold stores in the wholesale market places.

p. The women folk will be involved in the sales activities of agricultural products more effectively by enhancing their skills.

q. The agricultural marketing and pricing management programmes and services, if incorporated in small parts into various production programmes and units, can neither lead to the establishment of a full and well-organized, competitive agricultural market nor facilitate the optimum utilization of the limited resources for want of proper coordination. Therefore, this management programme will be conducted under one agency/unit. Under this unit, the agricultural marketing and pricing management programmes will be so launched that commoditywise, sectoral and functional specialization will be achieved as required. Arrangements will be made to establish a two-way information system for forwarding to the integrated unit the information about the projections of management and pricing requirements made by the units/ agencies engaged in production programmes on the basis of their experiences and handing down the information to the production/units/agencies of the market-created opportunities explored by the integrated unit. This will help in the development and extension of a tradition of selecting and implementing market oriented production programmes. For this purpose, reforms will be effected in the organizational structure of the units/agencies related to food and pricing, market research and development, economic analysis and agricultural statistics, and they will be developed into alert, efficient and professional structures.

Agricultural inputs Managements

The growth in productivity in the only most expedient factor that can contribute to the growth in agricultural development in the context of the limitations of cultivable land. Therefore, it is essential to ensure the adequate supply of productivity-enhancing inputs such as chemical fertilizers, improved seeds, saplings, improved breeds, agricultural credit, insecticides and pesticides. At present, the failure to arrange timely and adequate supply of these inputs has persisted as a big problem.

Since chemical fertilizers are not produced within the country and their supply hinges upon import, it has been realized that the irregularity in the supply of these inputs over the past few years had an adverse impact in the agricultural production. The main reasons behind this are the uncertainty about the time, manner and quantity in which the chemical fertilizers to be received under foreign assistance and loan would be available and the high prices they seemed to entail. At the same time, since the fertilizers to be acquired under foreign loan assistance can be brought from few specified countries alone, it appears that a higher price as compared to the international competitive market prices in to be paid. Various constraints such as the lack of funds on part of the agricultural inputs corporation to import fertilizers from its own financial resources, insufficient warehousing facility for the storage of chemical fertilizers, inefficient system of sales and distribution, absence of long-term plans and policies in respect of the import of fertilizers, and the lack of the arrangements for advance procurement and maintenance of bufferstock have created difficulties in the timely supply of fertilizers.

Similarly, due to the insufficient development of internal production sources, there has not occurred any qualitative amelioration or quantitative sufficient in the supply of improved livestock and poultry. The supply of improved seeds has not been so effective either. While, on one hand, the savings from internal sources is not being utilized in agro credit disbursement, there exists, on the other, a need to mobilize foreign loan assistance. In this context, it is felt that it has become essential to bring about reforms in policy matters as well as distribution system with a view to making the agricultural inputs easily accessible to farmers. Therefore, with the objective of increasing the production and productivity, the agricultural lime and improved seeds for various food, cash and horticultural crops, improved breeds of livestock and poultry, fish fry fruit saplings, insecticides and pesticides and agricultural credit.

Chemical Fertilizers

- a. Conducting a feasibility study on the production of chemical fertilizers inside the country, necessary infrastructure will be developed with the participation of the private sector.
- b. Increasing the participation of the co-operative and private sectors in the import and supply of chemical fertilizers, complete liberalization in the participation of these sectors will be achieved by the end of the plan period.
- c. With a view to bringing about regularity and certainty in the supply of chemical fertilizer, arrangement will be made of advance procurement of two years' supply. 25 percent of the targeted annual supply will be arranged to be maintained as a buffer stock. At the same time, to increase the certainty of the supply one season's supply will be stocked up in advance. In the development of warehousing facilities, attention will be paid to the establishment of additional facilities at appropriate places in collaboration with the private and co-operative sectors.
- d. In the distribution of fertilizers, special preference will be given to the irrigated sector.
- e. In order to discourage the probable trade diversion along the border areas, while fixing the sales price for chemical fertilizers it will be fixed at 20 to 25 percent higher than that of the border areas of India, as long as there remains the subsidy system on fertilizers.
- f. While a gradual decrease will be effected in the subsidy provided on the price of chemical fertilizers, the subsidy will be totally stopped by the end of the plan. The policy of selling the fertilizers at a uniform price all over the country will be discontinued. As long as the subsidy system continues, the private and cooperative sectors also will be provided with the subsidy and facilities to the extent they have been granted to agriculture inputs corporation on the cost of import, sales and distribution.
- g. As an integrated farming system in view to be developed to meet the demand for foodgrains in the hills through the production of potential local areas, the subsidy provided on the cost of transportation to the headquarters of the districts without motorway transport facilities will be continued. No transportation subsidy will be provided to districts with access to motorway transport.
- h. Priority will be given to the participation of co-operative associations in the distribution of chemical fertilizers. But, on parity will be observed in the facilities and concessions allowed on the sale and distribution of chemical fertilizers between the government and private sectors.

Improved seeds, plants, saplings and Improved Breeds:

- a. Gradually involving the private sector in the production, import and sale and distribution of improved seeds, breeds and plants etc., efforts will be made for these functions to be fully undertaken by the private sector by the end of the plan.
- b. The government sector will provide training, in addition to the supply of parental source seeds, saplings and breeds, in order to achieve seed multiplication in the private sector.
- c. As the grant or subsidy system has failed to make the private sector competitive, the subsidy system will be gradually discontinued as an incentive to seed, breed and sapling producers and for timely supply of these materials.
- d. As the timely supply, quality standards and management of improved seeds, saplings and breeds override the pricing and transportation factors, subsidy on prices and transportation cost will not be provided in normal circumstances. If there arises a need for subsidy in some specific areas due to some specific reasons, considerations may be given to awarding a special lump sum grant as a one time investment. However, for the development of resource centres to help meet the local requirements, a special lump sum grant, as seed capital, may be considered depending upon its effectiveness.

Plant protection and Animal Health Medicines:

The supply, sale and distribution of plant protection and animal health medicines will be made through cooperative and private sectors. To ensure the unhindered supply of these inputs and medicines to local production programmes, the task of providing training for developing small retailers will be undertaken under the concerned

programmes. The capital required for such trading activity will be provided as loan assistance in easy terms from financial institutions.

Agricultural tools and Mechanization:

- a. Priority will be given to small mechanical tools that can help in the growth of agricultural production and the productivity of agricultural labour force. However, no encouragement will be provided to the use of large machines which can make plenty of labour redundant.
- b. In view of the problem of the supply of seasonal workers at border areas, necessary steps will be taken upon conducting a study for an information system and the supply of suitable agricultural labourers in the private sector.
- c. In order to transfer the management of the production, sales and distribution of agricultural tools to the private sector, the attempts will be made to bring operation of the agricultural tools factory under private sector by the end of the plan.

Agricultural limes:

- a. Emphasis will be given on the sale and distribution of lime on a priority basis in those sensitive areas which have been recommended by soil analysis and management programme view of the usefulness of agricultural lime in the treatment of acidity in soil and the adverse effects of the excessive use of chemical fertilizers on the soil.
- b. Linking up the sale and distribution of agricultural lime with the sale and distribution programme of the agricultural inputs corporation, the distributing will be made through agricultural inputs corporation/private sector/cooperative associations.
- c. The agricultural extension programme will award subsidy on the transportation cost for sample demonstrations among farmers only when there is a need to raise awareness of the use of agricultural lime among farmers in sensitive areas recommended by the soil management programme. However, the agricultural lime industry will conduct the sale of its production fixing its sales price
- d. Efforts will be made to transfer the operation of agricultural lime industry to the private sector by the end of the plan.

Projection of the requirements of agricultural inputs and their supply:

In projecting the necessary supply of agricultural inputs to be procured by farmers from markets over and above their own input sources, due attention has been paid to the targeted growth in production and the probable contributions that the farmers' own resource inputs and those which may be processed from local markets to be achieved the desired increase in production. In the past, it appears that there was a lack of compatibility between the inputs projections and proposed production targets. One of the reasons behind this was the lack of development of sufficient bases for the utilization of the interrelationships between production and production inputs. Unless there evolves a practice of utilizing these base, they will neither develop nor expand, and nor can the plan formulation process be refined. Therefore, in the formulation of the eighth plan, the task of making projections for agricultural inputs has been initiated drawing some assumption from the available studies. The assumptions and projections used by the plan are as follows.

Improved seeds:

The requirement of improved paddy, wheat and maize seeds has been projected on the basis of the targeted increase in the areas of cultivable land to be covered by improved seed in food crops as follows: the area of paddy fields covered by improved seeds will be increased from the present 55 percent to 75 percent with an average annual increase of 5 percent and the area of wheat the hundred percent from the present 80 percent and the area of maize from 40 percent to 60 percent. Similarly, in millet and barley crops, while the improved seeds to be used in the first year of the plan amount to 20 and 10 m. tons respectively, they will be raised to 60 and 56m. tons respectively by the end of the plan. A national level projection of the improved seeds requirement of cash crops has not been made since their supply is managed at the local level through a local programme conducted by farmers and the concerned agency. The projected requirement of major crop seeds is as follows.

Table 14**Improved seed Requirement for major Food Crops**

(in metric tons)

Fiscal year	Paddy	Wheat	Maize	Millet	Barley	Total
1992/93	42488	56064	5952	20	13	104537
2996/97	58725	73800	9132	60	56	141773

Of the total requirement of seeds, a meager 2 percent is supplied by agriculture inputs corporation at present. In the past period. Instead of engaging in the production and sale of seeds for crop-production, the agriculture inputs corporation, upon receiving foundation seeds from research, will conduct a production and distribution programme in source seeds for the production of improved seeds at the farmers' level or in the private sector. The sale and distribution of improved seeds will be arranged by obtaining the supply of those seeds from the seed-producer farmers themselves.

The targeted supply of source seeds to be made available by agricultural inputs corporation is as follows.

Table 15**Sources seeds to be Distributed by****Agriculture Inputs Corporation**

(in metric tons)

Fiscal year	Paddy	Wheat	Maize	Millet	Barley	Total
1992/93	256	2500	150	42	95	3052
2996/97	320	3050	185	50	135	3740

Supplying the source seeds from agriculture Inputs corporation through J.T./J.T.A. s', the production and distribution programme of improved seeds will be conducted through seed producer farmers or farmers' groups.

Chemical fertilizers:

Viewed on the basis of the quantities of chemical fertilizers sold by agriculture inputs corporation in different seasons, the use of fertilizers in different crops stands as follows-30 percent in paddy, 27 percent in wheat, 15 percent in maize, 13 percent in potatoes and vegetables and the remaining 15 percent in cash crops. The greatest constraint in the use of chemical fertilizers, viewed in the perspective of demand and supply, seems to be the supply factor itself. One of the reasons for the failure to supply chemical fertilizers in time and in desired quantity is the lack of practical bases in assessing the requirement for different crops while planning the import of chemical fertilizers.

In projecting the chemical fertilizer requirement in this plan, due consideration has been given to the production targets of the plan, the contribution of production inputs other than fertilizers and also the probable contribution to production from the farmers' other internal resources. Keeping in view the management aspects also, more or less conservations on which the projection of chemical fertilizer requirement for paddy, wheat and maize has been made are as follows.

- Improved seeds will contribute 20 percent in increasing productivity.
- The irrigation facility to be available in the previously rain-fed areas will contribute 20 percent to the incremental productivity,
- The contribution of plant protection, publicity and extension services and farmers' internal resources to the targeted growth in production will amount to 30 percent,

- The relation of chemical fertilizers in nutrient and grains will stand at 1:8.

As the cash crops such as sugarcane, tobacco for cigarettes, and cotton receive constant monitoring and technical service from the concerned agencies and the farmers are encouraged to use chemical fertilizers in recommended quantities, the cultivated area and recommended quantities have been used as the basis for the projection of chemical fertilizer requirement for these crops. Since chemical fertilizers have a comparatively limited use among others in rape seed, pulses, sericulture, apple farming, and other horticultural crops, the chemical fertilizer requirement has been projected on the basis of past usage. The researchers' reactions and recommendations as well as the monitoring and evaluation of the plan will assist in effecting improvement on these bases in future. The projected requirement of chemical fertilizers is as under.

Table 16
Chemical Fertilizer Requirement for the Eighth Plan (in nutrients)

(in metric tons)

Fiscal year	Paddy	Wheat	Maize	Cash Crops (sugarcane, cotton, tobacco)	Vegetables and others*	Total
1992/93	38,800	35,600	20,000	8,100	34,380	136,880
2996/97	82,600	54,200	34,700	9,900	60,466	241,866

* Projection made on the basis of an estimate that 25 percent of the given fertilizers will be used for this purpose during the plan period.

The shares of nitrogen, phosphorus and potassium in the total consumption of chemical fertilizers during the last three years stand at 76.4 percent, 21.5 percent and 2.1 percent respectively. However, in view of the desirability of the increased use of phosphorus and potassium for the amelioration of the quality standards of the soil, the supply system of fertilizers will be so arranged as to comprise nitrogen in 66 percent, phosphorus in 26 percent and potassium in 8 percent with a view to bringing about a proportionate increase through agricultural extension services in the use of phosphorus and potassium.

In keeping with the policy of gradually involving the private sector in the supply of chemical fertilizers, arrangements will be made for the participation of the private sector and agriculture inputs corporation in the supply of supply of necessary fertilizers as given below.

Table 14
Improved seed Requirement for major Food Crops

(in metric tons)

Description	1992/93	1996/97
Chemical fertilizer requirement (in nutrient	136,880	241,866
Supply through Agricultural Inputs Corporation	112,400	168,000
Supply through Private sector	24,480	73,866
Percentage of Private sector participation	18%	31%

Agricultural Lime, plant protection Materials and Agricultural tools:

In view of the policy of encouraging the involvement of private sector in the supply of agricultural lime, plant protection materials and small agricultural tools, no programme will be made during the eighth plan with the provision of subsidy on the production and sale of these inputs.

The proposed distribution targets of the agricultural lime industry and agriculture inputs corporation for the eighth plan period are as given in the table below. These targets are based on the respective capacity of these agencies.

the agriculture inputs corporation will formulate its programme as usual for the distribution of plant protection materials in the areas not covered by private sector and in times of crisis.

Table 17

Targets of the agricultural lime Industry and Agricultural tools Factory

Description	Unit	Base year	Final Year of the eighth plan
Distribution of agricultural lime	m.tons	686.0	1200.00
Distribution of agricultural tools (including pump sets)	Ruppees in million	60.0	81.5

Improved Livestock and poultry, Fruit saplings, vegetable seeds and fish fry distribution:

The details of the livestock and poultry, fish fry fruit saplings and vegetable seeds to be distributed as production inputs from the government sector under the livestock and poultry development, horticultural development and fishery development programmes will be as follows.

Production Inputs	Total for the Eighth Plan Period
Buffalo Bulls	79 nos.
Bulls/Cows	175 nos.
Rams/Ewes	1085 nos.
Yak/Nak	216 nos.
He-goats	241 nos.
Pigs	3360 nos.
Poultry chicks	1,571,000 nos.
Ducklings	180,000 nos.
Artificial insemination	150,000 nos.
Improved grass seeds	94.4 m.tons
Improved pasture grass seeds	2.3 m. tons
Fodder saplings through forestry programme	6,769,000 nos.
Fruit saplings – horticultural farms	2,112,000 nos.
- private nurseries	7,484,000 nos.
The distribution level for 1996/97	
Vegetable seeds – government farms	17.6 m. tons
- farmers' level	164.0 m. tons
Fish fry – government farms	10.4 million nos.
- private hatcheries	49.4 million nos.

Food processing technology, quality control and nutrition service:

It is necessary to develop, improve and extend appropriate food preservation, storage and processing technologies in order to bring about desirable changes in the nutrition level of the general public through an increased availability in food commodities in the country. Furthermore, identifying nutritious food items, the methods of consuming them and maintaining control over the quality of processed foods, support will be extended to the task of controlling possible adulteration of food in the market and maintaining purity of items in the course of sale and distribution. In the perspective of these requirements, the programmes with regard to food processing, quality control and nutritional improvements will be conducted in the following manner during the eighth plan.

- a. Programmes will be implemented which will encourage the farmers towards improving upon their income and employment. Their capabilities will be enhanced to produce better preserved, safer and more value added processed foods by improving their traditional preservation and processing techniques confined so far to their household.
- b. In order to provide assistance to the development of agro-industries, service oriented programmes will be conducted to make available skill-oriented technologies to entrepreneurs. For this purpose, up-to-date information on technologies and equipment will be maintained.
- c. Conducting biotechnological studies and research into enzymes, technical support will be extended to agro-industries.
- d. The apple processing centre located at Jumla will be handed over on lease to the private or cooperative sector.
- e. In order to maintain purity, healthiness and appropriate quality standards in food and beverages and other feeds from the place of their production to consumers and to the export points, there will be organized and regular inspection, supervision and monitoring of production, storage, import points and of the market. Assistance will be provided in fixing quality standards on the basis of the results obtained from the analysis of necessary sample tests.
- f. A programme along with the management of mobile teams will be implemented for providing assistance in the production of quality products upon monitoring the food and beverage industries.
- g. Studies and analysis of food contaminants resulting from the use of insecticides and pesticides in agriculture will be conducted. The information on the safe limits in terms of health will be made known to the farmers through the agricultural extension and communication services.
- h. A programme will be conducted to provide services pertaining to the analysis of quality standards of food and beverage commodities to government and non-government organizations and undertakings, as well as the private sector.
- i. Feasibilities will be explored as to the establishment of necessary infrastructure including policy and legal measures in the private sector to undertake the function of analyzing and monitoring the quality standards of food and beverage, and feed materials.
- j. With a view to providing assistance to family nutrition level and food safety, simple techniques of preparing cheap and nutritious baby foods grains, pulses and vegetables will be developed and extended, and their use will be encouraged through publicity.
- k. In order to bring about improvement in the nutrition level of certain population segments of importance in terms of nutrition such as children, pregnant women, breast feeding mothers and the rural people, particularly the small farmers landless peasant families, a cost effective variety of food recipe will be prepared and publicized. These publicity materials will be prepared focusing especially on the women folk. Furthermore, a rural household nutritious food production and consumption improvement programme will be gradually extended to various districts with a view to improving upon the nutrition situation of rural families.
- l. A nutrition surveillance, monitoring and evaluation system will be introduced to reform the nutrition policy making, plan formulating and implementing techniques and to evaluate their impact on the basic nutrition indicators and data.
- m. Extending technical support, the private sector will be encouraged in the commercial production, sale and distribution of cheap but nutritious foods.
- n. In order to make the children aware of the nutrition situation from their early age, co ordination will be established with the curriculum development programme of the Ministry of Education for incorporating appropriate teaching and learning materials on nutrition into the school level text books.

Agricultural Statistics and Analysis Programme:

In the context of increasing significance of contemporary statistics in the formulation, implementation and evaluation of agricultural development programmes, it is necessary to bring about effectiveness in the reliability, the extent of scope and diverging of agricultural statistics.

Due to the deficiency in the use of available practical methods of data collection, the inefficient management of district level data collection units and the lack of an efficient supervision system, the available data have not been up to date, reliable and regular. Several small food crops have not been even brought within the purview of statistics. Similarly, the data on food, cash and industrial crops of the areas emphasized upon by the agricultural programme have not been collected in the categories of irrigated and unirrigated sectors, and the improved and local technology usage. The data collection on livestock and poultry and their products has been initiated but the collection system has not been able to forge ahead in an organized manner. The data on horticultural and vegetable crops have not been even brought under the annual agricultural data collection system and are limited to technical estimates. Uniformity has not been achieved in agricultural data. Consequently, the available data are being used in different ways as convenient to the users, which has created an adverse impact on the reliability of the data. There does not exist any system of making an independent assessment of the quality standards of the collected data either.

Effective policymaking, plan formulation, evaluation and research require efficient use of relevant data. Therefore, against the above-mentioned constraints, there is a great need of making the agricultural statistics more reliable and effective. For this, the programme will aim at extending the scope of agricultural analyzing the data, and making an independent assessment of these tasks on a regular basis. Accordingly, the statistics development programme will be conducted as follows.

- a. Studies and research will be conducted for timely improvements in the collection, processing and analysis of agricultural data analysis of agricultural data for evolving a practical agricultural statistical methodology. This task of developing and utilizing an appropriate quantitative methodology will be undertaken as a project. The prevailing agricultural data collection, processing, analysis and publication work will be strengthened by gradually introducing the agricultural statistic techniques recommended by experimental studies and their findings. Furthermore, training programmes will be conducted for data collectors in the efficient utilization of agricultural statistical techniques.
- b. In order to bring about uniformity in agricultural statistics, the data to be obtained from concerned units will be used in the formulation and evaluation of agricultural programs. In the event of any revision required in them, it will be made in close contact with the concerned unit.
- c. The district level statistics management will be further strengthened and extended.
- d. With a view to making agricultural statistics more reliable, priority will be given to enhancing the reliability of data collation through efficient field survey, supervision and monitoring. The preliminary estimates of major food crops will be updated through field survey and supervision and similar approach will be extended to other crops, too.
- e. Paddy, wheat, maize, barley, naked barley, buckwheat and pulses will be taken as major food crops for crop statistics. Apart from collecting district wise average statistics, the data on these crops will be collected, processed, analyzed and recorded in such a manner which will facilitate the evaluation of the agricultural programme achievements on the basis of irrigated/ un irrigated sectors and improved technology/local technology utilization the priority sectors of the programme.
- f. In vegetables and horticultural field, an appropriate methodology will be developed for data collection on fruits. Pilot surveys will be conducted in the first two years in accordance with the evolved methodology. As for vegetables, national level data will be collected on selected nine vegetables of importance. Subsequent to the pilot surveys of fruits in the first two years, the bananas and apples will be initiated after the second year. The national level data collection on oranges/sweet oranges also will be begun from the third year after undertaking pilot surveys in the first two years.
- g. As for livestock and poultry, cattle, buffaloes, goats, sheep, pigs, chicken and ducks will form the basis for national production statistics. Developing data collection techniques through experimental studies, the methodology of data collection on livestock and poultry, and animal products will be revised. The production data from commercial farms also will be included in the data collection.

h. For fish statistics, priority will be given to the data on ponds and pond fish farming. Furthermore, adopting appropriate techniques for the coverage of fish production from other sources, attention will be paid to the collection of the production data from those sources, too.

i. Under economic statistics, data will be collected on various aspects extending to the wholesale and retail production cost of agricultural products, agricultural inputs and farm management costs, export and import of agricultural commodities and the inter-district transfer of agricultural products. At the same time, emphasis will be laid on the preparation of analytical reports through studies on the impact of agricultural programmes and policies on the farmers' income and employment situation, economic analysis of agricultural commercialization, determination of the ratio and coefficient of the share of contribution of various production inputs in the increase in production.

j. A report will be published annually upon analyzing the impact of agricultural policies and programmes on the national agro-economy on the basis of the production and economic data collected under agricultural statistics programmes.

k. Arrangements will be made for maintaining district profiles of all districts. The district profiles will be updated by maintaining pictorial statistics indicative of the existing infrastructure and resource endowments and descriptive statistics of production sources and production levels at the district level. These descriptions will be used as the basis for national statistics. An agricultural data bank will be established at the center and updated data will be published at the national level. To ensure uniformity and reliability of the statistics, arrangements will be made for the establishment of an agricultural statistics monitoring and the subcommittee prior to their publication will verify publication subcommittee and the data. In this regard, agreement will be made for independent assessment of fieldwork in agricultural data collection on the basis of small sample collection techniques.

Agricultural Research:

It is a well-known fact that the modernization of agricultural sector is possible through the application of science and modern technologies. Towards this end, it is essential for appropriate technologies to be developed on the basis of agro-ecological diversity of Nepal and its socio-economic realities. In order to develop the greatest possible number of suitable technologies at the fastest possible pace, it requires, as demonstrated by the effective and efficient research system. On the whole, agricultural research has the following roles to play in agricultural development:

- To develop technologies on the basis of national and regional priorities.
- To develop and distribute genetic materials.
- To strengthen the technology transfer process by involving the agricultural extension program in outreach research based on farmer's field to be conducted in accordance with the concepts of farming system.
- To develop appropriate technology for the control of ecological imbalance emerging in the agricultural sector.

Organizational Development of Agricultural Research:

In the course of organizational reform of agricultural research, a National Agricultural Research and Services Center was established under the Department of Agriculture in the beginning of the Seventh Five-Year Plan. This may be said to be the initial model of the present Nepal Agricultural Research Council. For the purpose of undertaking, monitoring and coordinating all research activities pertaining to agriculture, this center was maintained under the aegis of the Ministry from 1986, to operate in accordance with the policy directives of the National Agricultural Research Coordination Committee of the Ministry of Agriculture. This can be said to be the second step towards the creation of the present Council.

Realizing the need for incentive-oriented work system, research-oriented manpower mobilization and flexible economic policy for efficient agricultural research, His Majesty's Government established an autonomous council in 1990/91 by promulgating "Nepal Agricultural Research Council Act, 1991". However, as the administrative, financial and organizational by-laws, provisioned in the Act, have not been formulated to date, the research system has not yet required the anticipated dynamism. Therefore, bringing about necessary reforms in the work management of the Agricultural Research Council within the plan period for ridding the council of its status quo,

emphasis will be given to the task of developing technologies necessary for upgrading the standard of living of the Nepalese farmers.

Review of the Current Agricultural Research Programme in Totality

Various commodity specific, subject specific and area specific research programmes running to date have led to the development of some remarkable improved technologies in major food crops, particularly paddy, wheat, maize, pulses, oilseeds, potato and vegetables, and in some cash crops such as sugarcane, cotton, and tobacco. They seem to have been extended to and are being used at technologies were not confined to crops only; they are being extended to other sectors such as livestock and poultry, horticulture and fish production, too. It is the special emphasis laid on the organisational growth of agricultural research during the seventh plan period that has made it possible to impart the present structure to the Council. Yet, an analytical review of prevailing state of agricultural research reveals several organisational, management, technical and coordination related constraints to efficient agricultural research.

Objectives:

The long term agricultural development targets of His Majesty's Government in Accordance with the 'Policy Framework of Agricultural Development' and the priorities determined by the Ministry of Agriculture for the attainment of the said targets will form the major basis of the agricultural research programme. The major objective of agricultural research will be to assist in the growth of agricultural production and productivity through the development of appropriate agricultural technologies on the principles mentioned above. Accordingly, the major objectives of agricultural research in this plan period will be as follows:

- To lay down the foundation of an efficient and dynamic national agricultural research system by removing the prevailing constraints on the operational system of the council,
- To lay emphasis on developing appropriate technology to render sustainability to agricultural system in the rainfed land and the hilly areas which are not yet accorded priority status,
- To sustain the basic level of appropriate technology development with regard to intensive farming, crop diversification and cash and industrial crop with a view to attaining maximum possible agricultural production in easily accessible, irrigated and fertile areas,
- To better utilize the opportunities of comparative advantages in terms of agro-ecological diversity for the farming community and agro-based industries and make the present agricultural research market led production technique oriented,
- To develop appropriate technologies for the conservation and rehabilitation of marginal land with a view to maintaining environmental balance and those suited to farmer's resources endowment in keeping with the concept of farming system for sustainable agricultural development. Also, to develop such technologies which may discourage irrational use of pesticides and chemical fertilizer as well as unsystematic animal husbandry and agricultural system,
- To eliminate the inequalities and incompatibilities among various fields of agricultural research and to prepare the groundwork for the task of developing balanced technologies.

Programme Implementation Policy:

The following work arrangements will be made in order to implement the research programmes to be formulated in accordance with the above objectives determined by the Eight Plan:

Organizational Reforms:

Necessary reforms will be brought about in the financial management, manpower management, general administration, programme plan formulation, evaluation and monitoring techniques in order to mobilize Nepal Agricultural Research Council as a fully autonomous but duly committed agency to the national targets of agricultural development. Furthermore, organizational reforms will be effected with a view to strengthening theater agency coordination and association among the agencies operation under the council. These agencies will also be mobilized as resource centers for commodity specific and regional research programmes. In this context,

an appropriate environmental research unit also will be established to monitor the environmental adaptability of the research recommended technologies.

Priority Determination:

In order to make a better utilization of the limited national means and resources, the process of determining priority areas for agricultural research will be made even more scientific. Accordingly, a tradition will be established to determine the national priority on the basis of regional priorities. Farmers and agro-entrepreneurs also will be involved in the process of determining regional priorities. For determining agricultural priorities, a scientific process will be adopted.

Research Network and the Division of Working Areas:

Since a research network is indispensable for the development of technologies in keeping with regional priorities, a research network will be established taking the following points into consideration:

- geographical situation of the crop or commodity,
- agro-ecological diversity,
- A prospect of utilizing the available facilitates means and resources of the departments and organizations outside the purview of the council.

Thus, the scope of operation of some specified research centers will be gradually widened with a view to covering the entire requirements of the agricultural system.

The network and the field of operation of Nepal Agricultural Research Council are presented in Table 19.

Programme Formulation Process:

A decentralized programme formulation system will be adopted to make the research programme formulation process more scientific. For this purpose, a system will be established for the increased participation of farmers and agro-entrepreneurs in the task of programme formulation. The research programmes will be developed in the form of projects with clearly defined concrete targets, fixed duration and a responsible scientist in charge.

Arrangements for subject specific panel:

Various subject specific panels with the provision of representative from different regions will be established to investigate whether or not the project proposals developed by research programmes as mentioned above are technically viable, effective and in keeping with national and regional priorities. Arrangements will be made for these panels to assist the Nepal Agricultural Research Council in developing the policy aspects of plan formulation, evaluation and monitoring.

Internal and International coordination:

Since coordination with departments and organizations outside the council is essential for making the agricultural research work effective, the council will initiate appropriate systems for effective coordination with them from the operational level to the policy level. In view of the fact that in a country like Nepal with limited means and resources, it is essential to give priority to the task of importing modern technologies developed by friendly nations, particularly the South Asian neighbors, and regional and international agricultural research institutions and adopt those technologies to local environment, the following procedure will be adopted to establish coordination with the said nations or institutions:

- Upon contacting the concerned institutions directly the council may sign formal minutes of understanding with them.
- At bilateral governmental level, the council will sign formal agreements through the Ministry of Agriculture.
- Scientists will be encouraged to maintain informal ties with different institutions.

Provision of Project Grants and Resource Mobilisation:

Arrangement will be made for awarding necessary grants to an individual scientist or a recognized skilled person to undertake superior quality research projects in keeping with the national or regional priorities. In mobilising the available means and resources in accordance with the approved laws and by laws of the council, due attention will be paid to the following matters:

- To attain maximum utilization of the existing manpower.
- To make provision for absorbing appropriate personnel from outside into the council through a phased creation of job positions. To undertake a similar mobilisation of the council's manpower, unfit for research work, in other sectors.
- To lay special emphasis on the repair, maintenance and renovation of the existing physical resources.
- To expand physical capacity for research in the so far neglected areas as per the priority scale.
- To arrange for a separate fund for the council.
- To implement the budget on the basis of the budget outlay allocated for the duration of the project.
- To make arrangements for the maintenance of a revolving fund in every agency from its own income in order to meet contingency expenses.
- To utilize bilateral and multilateral donor agency resources with a view to lessening the economic burden of grants for agricultural research development on His Majesty's Government.

Outline of the Research Programme of the Eighth Plan:

The research programmes to be conducted in various sectors will primarily be of two categories:- (1) on-station and (2) outreach-research based on farmers' field. The research programmes of both categories will be based on the farmers' problems. The identification of the farmers' problems will be made through socio-economic survey of the influence zone of the research centres and the information acquired from farmers and agricultural extension programme.

The on-station research will mainly consist of two types of work: (I) coordinated Research and (II) Area specific Research. Coordinated research will be based on national priority and will be conducted in a coordinated manner through various national level commodity-specific or subject-specific research programmes. Area-specific research works will be based on regional priorities and will be conducted through agricultural research centres.

Out reach-research based on farmer's field will be oriented towards solving the farmers' problems and obtaining certification of technologies. The chief responsibility of conducting these programmes will be borne by agricultural research centres. These programmes will be adequately participated in by farmers as well as agricultural research and agricultural extension agencies.

Technical support to the research centres will be provided through the farming system and out reach research programme from the central level in accordance with the policy directives of the national out reach research coordination committee.

In order to accelerate the technology transfer process, it is aimed to increase the participatory role of agricultural research in training and communication programmes. In keeping with this arrangement, the council will provide a resource instructor and promote an effective exchange of conclusive research findings.

Table 20 enlists the prominent research agenda specified for this plan period.

Monitoring and Evaluation:

The following process will be adopted at the policy as well as operational level for strengthening the monitoring and evaluation system, which will conduct a scientific evaluation of the research programme so as to ascertain whether or not they have been conducted in accordance with the targets of the programme.

At the Operational Level:

- Each project will be assigned a project chief, who will submit periodic progress reports in a specified format to the chief of the programme.
- Each programme chief will prepare and submit periodic reports - in a specified format on the projects operating under the programme to the council and a copy will be forwarded to the subject specific panel, too.
- The monitoring and evaluation work of the out reach research programmes will be made more effective through groups visits participated in by all three components-researcher, agri-extension workers and farmers.
- Evaluation will also be made on the basis of the working papers and progress reports presented in the half yearly or annual seminars.

At the Policy Level:

- Each subject specific panel will submit a progress report on the projects related to its subject to the programme sub-committee once every six months.
- The programme sub-committee will submit a half-yearly progress report for every 6 months to the council.
- In the fourth year of this plan, the effectiveness of the research programmers, priorities and management aspects of the Nepal Agricultural Research council will be evaluated by an independent agency.

Table 19

The Research Network of Nepal Agricultural Research Council

Research Centers	Research Areas
A. Sub-tropical	
1. Tarahara	Paddy, Maize, Wheat, Pulses, Oilseeds, Sugarcane, Potato and Winter grass-crops, banana, pineapple, fruits like papaya and litchi, dried ginger, betel-leaf, Spices like black pepper, Vegetable crops, buffalo, poultry, pigs, cattle and organic manure.
2. Itahari	Jute crop.
3. Belachapi	Tobacco crop.
4. Janakpur	Pond fish farming.
5. Jitpur	Sugarcane crop
6. Parwanipur	Paddy, Maize, Wheat, Pulses and potato crops, Mango, bababa, fruits like litchi and vegetable crops.
7. Rampur	Maize, paddy, wheat, millet, buck wheat, pulses, oilseeds and winter grass crops.
8. Yagyapuri	Banana, fruits like pineapple and papaya.
9. Bhairahawa	Paddy, wheat, Pulses, oilseeds, sugarcane, potato and winter grass crops.
10. Nepalgunj	Paddy, maize, wheat, pulses, oilseeds, tobacco, cotton and potato crops, mango, banana, papaya, fruits like grapes, vegetable crops, organic manure, buffalo and grass crops.
11. Dhangadi	Goat, sheep and silvipasture.
12. Ranighat	Research in agricultural tools and animal power-driven equipment
B. Warm Temperate	
13. Khumaltar	Subject specific research *, potato * and vegetable crops*, animal research*, paddy, maize, millet, buckwheat, barley, amaranth, pulses and oilseed, genetic materials protection and organic manure*.
14. Kirtipur	Pear, grape, peach, fruits like plums* and citrus fruits.
15. Tripureshwar	Animal Health Research.
16. Godavari	Fish farming in natural water reservoirs (for cold water).
17. Kavre	Hill crops, paddy, maize and wheat crops.
18. Pakhribas	Paddy, maize, wheat, hill crops, pulses, potato and oilseeds, banana, pineapple, pear, peach, grapes, fruits like plums, vegetable crops, cardamom, cattle, pig, silvipasture and grazing field management.
19. Kanyam	Tea.

20. Phikkal	Cardamom and dried ginger
21. Khairenitar	Maize and the crop system based on Maize crop.
22. Nigale	Potato crop.
23. Bandipur	Goat*, summer grass crops and silvipasture.
24. Pokhara	Pond fish farming, orange, vegetable and potato crops, dried ginger, goats and sheep*, buffalo, pig, poultry, silvipasture and grazing field management, some rgrass crops.
25. Lumle	Pally, mize, wheat, hill crops, pulses, oil seeds, vegetable and potato crops, orange, pear, peach, grapes, fruits like plums, cattle, silvipasture, grazing field/pasture management, and organic manure.
26. Surkhet	Paddy, wheat, hill crops, pulses, oilseeds, vegetable and potato crops, organic manure, summer grass crops.
27. Dhankutta	Orange and vegetable crops.
28. Salyan	Ginger.
29. Gulmi	Coffee.
30. Rukum	Vegetable crops.
31. Dandeldhura	Vegetable crops.
32. Dailekh	Orange and pear.
33. Baitadi	Apple and walnut.
34. Trishuli	River fish farming.
c. Cool-Temperate	
35. Marpha	Hill crops, vegetable and potato crops, apple and walnut, pasture and grazing field management, hill goat and Tibetan sheep.
36. Syangboche	Yak, hill goat and grazing field management.
37. Guthichour	Sheep, pasture and grazing field management and Daruwal sheep.
38. Jumla	Paddy, Wheat, hill crops and potato crops.
D. Miscellaneous	
39. Central food Laboratory	Food technology.
40. Dairy Development Board	Dairy Science
41. Department of Forest and Botanical Research	Agri-forestry, silvipasture and soil conservation.
42. Institute of Agriculture and Animal Sciences	Basic research in various subjects.

Main research centre for the specified crops / commodity.

It is realised that since the Dito (Dipayal) Agricultural Centre located in the Far-Western Development Region can not represent the warm temperate region, a new research centre needs to be established in lieu at Patan (Baitadi). But in other areas where there are no farm centre, it is felt that instead of establishing a new centre, the existing farm should utilize for its out reach research stations the farmers' fields and household, animal shelters or the available facilities of the governmental or non-governmental agencies.

Table 20

Major Research Agenda for the Eighth Plan

1. Crop Research	a. Development of suitable varieties for rainfed sloping land (pokho) and farms.
	b. Development of appropriate technology for commercial farming in easily accessible, irrigated and fertile Terai and Terai like areas.
	c. Development of crop management and cost effective technologies.
	d. Integrated disease and pest management.
	e. Development of post harvest loss control technology.

	f. Development of appropriate technology for the promotion of import substituting cash and industrial crops.
	g. Development of high quality varieties for export.
2. Horticultural Research	a. Development of suitable varieties for different agro-ecological systems.
	b. Development of appropriate technology for low weight high value crops.
	c. Development of appropriate technology for orchard management and horticultural crop management.
	d. Development of post harvest and post processing preservation technology.
	e. Development of varieties of sweet potato and other appropriate technologies.
	f. Development of horticultural crop seed production technology for export promotion.
3. Livestock and poultry Research	a. Development of nutrition and feed technology.
	b. Development of livestock and poultry management.
	c. Improvement of breeds for productive sectors.
	d. Improvement of disease control technology.
	e. Development of appropriate technology for the production of high quality wool required for carpet industry.
4. Fishery Research	a. Development of nursery management and breeding technology.
	b. Development of appropriate technology for fish feed.
	c. Development of fish farming technologies suited to different types of water reservoirs.
	d. disease and insect control.
5. Environmental Research	a. Studies on the effect of pesticides and chemical fertilizers on the environment.
	b. Development of fodder crop management and systems technology.
	c. Agro forestry research.
	d. Hill silvipasture studies and Research.
	e. Genetic materials protection and promotion.
	f. Development of appropriate technologies for the conservation and rehabilitation of marginal land and for the soil fertility promotion and fertility reduction control.
	g. Study of the impact on the environment of the existing unsystematic livestock farming in urban areas.
6. Miscellaneous	a. Development of appropriate technology for sustainable farming system.
	b. Small and medium size bull driven agricultural equipment.
	c. Bio technology.
	d. Food technology and milk processing.
	e. Studies on social, economic and agricultural extension technologies.
	f. Development of appropriate technology for mushroom farming.

Co-operative Development:

Background:

In a society marching towards the creation of a democratic and egalitarian culture, the significance of cooperative movement is not confined to the economic life alone; it also contributes to the establishment of social and moral values. In a country like ours with the predominance of rural areas, the cooperative can become a medium of the all round development of the rural community in particular. Furthermore, the cooperative movement can be an effective means of rural poverty alleviation as well.

By the seventh plan period there were, as it appears, 830 agricultural cooperative societies in 72 districts, district cooperative unions in 33 districts and their total turnover stood at Rs. 670 million. Besides these, there were 54 non agricultural and commodity specific cooperative societies.

In the past, instead of promoting democratic culture, efforts were directed towards developing cooperatives under government control and direction, contrary to the spirit of cooperation. Especially during the fifth plan when the compulsory savings amount was converted into cooperative shares, a situation of mandatory membership emerged which led to the increased dominance of rich and powerful people. The non agricultural cooperatives, too, could not be effective due to the absence of clear direction. The cooperative programme even as a government programme, lacked effective monitoring and guidance and this sector remained more or less neglected. Consequently, despite plenty of prospects, the cooperative movement could not make any tangible impact at the people's level.

Objectives:

1. To extend support to accelerate the social and economic development of especially the deprived class of people of the rural areas through the promotion and development of democratic cooperative societies/unions on people's own initiative, with their participation in accordance with their needs and aspirations.
2. To extend support to national economy by augmenting the local economic activities

Policy:

1. Mobilizing the cooperative movement as a self inspired, voluntary and autonomous movement of the people, assistance will be extended to the development of democratic and socio economic organizations.
2. In order to advance the cooperative movement and economic activities in a healthy manner, the cooperative spirit will be infused among the people through membership education and extensive publicity.
3. Assistance will be provided for the establishment of an integrated, strong and effective cooperative system through maximum participation of the local people in economic activities with the mobilization of small capital and skills scattered particularly in the rural sector. Priority will be accorded to women's participation in such cooperative system.
4. Formation of necessary cooperative societies/unions at the local's central as well as national levels will be encouraged in such a manner that cooperatives adopt fully democratic system in their management and maintain transparency in such cooperative system.
5. First priority will be given to cooperatives for collaboration or business operation to be undertaken by any government or non governmental agencies.
6. As cooperatives will be engaged in the supply of means of production, sale and purchase of produced commodities, and various other activities oriented towards agricultural production and industrial enterprise, they will be increasingly involved in planning, publicity and programme implementation processes from the center to the district and village levels.

Programmes:

In accordance with the above mentioned objectives and policies, the cooperative development programmes will be implemented during the Eighth Plan as follows.

Cooperative Education and Training Programme:

In view of the significant role of cooperative education and training in promoting the cooperative movement on the basis of self inspired participation and leadership of the local people, this programme will be implemented during the plan period in the following manner.

1. Training methodology will be revised and professionalized in order to make the cooperative education and training as well as management development activities more effective.

2. Knowledge of the conceptual as well as practical aspects of cooperation will be imparted to the members of the cooperatives through cooperative education camps, study tours, seminars etc. and also through mobile training programmes by giving priority to the participation of women.
3. With a view to enhancing the professional skills and capabilities of the leaders of the cooperative, cooperative employees working at various levels and concerned civil servants, necessary basic as well as advanced training centre by utilizing various training techniques and by adopting the mobile training approach as well.
4. Subject specific training programmes will also be organized for cooperative employees and office bears on such technical aspects as mobilization of savings and credits, preservation and processing of agricultural inputs and produce, cold storage, as well as on the use and safety procedures of processing equipment depending upon the nature of programmes to be undertaken by the cooperative societies of unions.
5. By making a special action plan, training will be imparted to small craftsmen and artisans with special traditional skills but fast disappearing due to their inability to become economically viable, to enable them to organize themselves into groups on co-operative basis to carry out skill related industry or vocation, to expend economic activities and business and also to further develop their skills. Such groups will be provided with credit facilities by maintaining co-operation with financial institutions.
6. With a view to enabling trained co-operative leaders and employees to apply newly acquired knowledge in their respective job situations and also to continuously improved the content of training on the basis of changing needs of the participants, different aspects of training will be regularly evaluated and a management consulting programme will also be run. The cooperative training Centre will provide consulting service to co-operative on different aspects of management upon their request.
7. Training for trainers also will be organized with a view to augmenting the skills and efficacy of the instructors. In addition, training and educational materials will be developed as per the requirements of the target group. Research studies will also be conducted to enhanced the efficacy of the training programmes.

Development and Strengthening of Institutional Infrastructures:

1. co-operative will be reorganized and promoted in such a manner that they adopt fully democratic systems in their management and maintain transparency in their business. These co-operative will play a significant role in extending technical services, means of production, credit and marketing services in their areas with a view to mobilising the scattered savings of the rural sector and helping attain continuity of the economic activities.
2. Reassessing the need for special banking services to provide necessary loan to co-operative in a simplified manner and to assist the village level co-operatives to carry out the programme for mobilising the savings of their members, a co-operative bank will be established at the national level with the share participation of all interested co-operative of the kingdom, His Majesty's Government and financial institutions. The co-operative bank will promote the savings and credit co-operative societies at the village level and in the long run, arrangements will be made to have this bank owned entirely by co-operative societies and unions to act as the central agency of these societies.
3. Since the co-operative belongs to the sector that is to maintain transparency in its business activities, a co-operative Development Fund will be set up at the national level to support co-operative movement and assistance will be provided through the fund for the promotion, development and the creation of infrastructure of the co-operative societies.
4. Existing co-operative societies with no prospect of ever becoming economically self reliant or those laying moribund will be dissolved after proper assessment. The co-operative societies capable of attaining self reliance with some appropriate reforms will be steered accordingly. While establishing new co-operative societies, full attention will be paid to economic viability.
5. In view of the co-operatives ability to play a significant role in rural economic activities, the co-operative will be gradually developed into institutional set up for rural poverty alleviation.
6. In order to provide leadership to co-operative movement, give directives to co-operative societies and to provide technical and business services to its members, a National Co-operative Federation will be set up and

promoted during the Eighth Plan. This will immensely facilitate the development, promotion and the growth of their business.

7. In order to effectively steer ahead the co-operative movement, National Co-operative Development Board will be developed as an expert agency between His Majesty's Government and the co-operative movement. The Board will assist His Majesty's Government in the task of formulating, implementing and reviewing the policies by monitoring co-operative activities for the development of co-operative . Furthermore, the Board will act as an advisory body to bring coordination among the agencies of His Majesty's Government in the operation of co-operation of Cooperative Development Fund and in taking appropriate policy measures by evaluating the feasibility of the programmes of cooperative unions and societies.

8. As the co-operative sector is in itself a distinct professional sector, the existing cooperative Training Centre will be gradually developed into an academic institute to enhance the training standards of this sector.

9. The books of accounts of co-operatives will be audited by a registered auditor and in the backdrop of the proposed institutional development, the organizational structure of the existing Department of co-operatives will be reconsidered.

Development of Physical Infrastructure:

Emphasis will be laid on the development of physical infrastructure in the co-operative sector as this sector's infrastructure development such as go downs, cold storage, local wholesale market and colletin centers and establishment and strengthening of processing industries will contribute to the furthferaces of economic activities in agriculture as well as other sectors. For this purpose, facilities such as occasional soft loan, technical support services, loan against collateral etc. will be provided for capital development on priority basis in consultation with National Co-operative evelopment Board. However, while making such facilities available, focus will be placed on sectors which do not affect private sector's ability to enter into competition and in programmes directly supporting rural poverty alleviation.

Agricultural and Rural Credit:

The institutional credit system plays a great role in bringing about acceleration and momentum in agricultural and rural development. The majority of the farmers are economically handicapped small farmers lacking in productive means and resources to adopt improved farming system and increase their income and employment opportunities. In this context, the credit system can contribute immensely to the supply of capital required by them for arranging productive means and resources.

With the beginning of the institutional credit in Nepal, there appears to have been an extension of opportunities for farmers to acquired improved resources, inputs and technology necessary for increasing their production and to augment their income. It has been realized from the experience of the places which were extended the services of small Farmers Development Programme and the production credit programme for women that in the event of proper arrangements for credit facilities the small farmers and entrepreneurs as well as deprived families can arranges for productive means, better utilize their skill and labour and raise their standard of living making reasonable economic gains.

The flow of institutional credit to the majority of farmers, especially small farers and tenant farmers, artisans and poor labourers has been extremely negligible. It is a fact that there can not be an accelerated overall economic development without the economic upliftment of this section. It has thus become essential to make necessary capital available through the medium of proper credit system for channelizing the labour resources of the said segment of population towards productive activities of the agricultural and the objectives, policies and activities of the agricultural and rural credit programme during the Eighth Plan will be as follows.

Objectives:

1. To assist in increasing the production and productivity through improved farming system by making necessary capital available to the farmers for agricultural modernization.

2. To arrange financial capital under poverty alleviation programme for increasing the opportunities of income and employment to small farmers, tenant farmers, artisans, small entrepreneurs, and the weak and deprived segments such as landless peasants and labourers.

3. to make necessary capital available to entrepreneurs and traders to promote and extend agro-based industries and trade, and to utilize the existing energy sources to the maximum possible extent.
4. to bring about sustainability in the credit programme in accordance with banking principles.

Policy:

1. Since it has become highly essential to mobilize the local resources of the rural areas, special emphasis will be given on the mobilisation of savings through small farmers development programme, women development programme, co-operative organizations and community development programmes conducted by non-governmental organizations. Priority will be given to loan disbursement in the areas where intensive programme has been introduced.
2. the special credit programmes such as the on-going small farmers development programme and integrated banking programme will be further strengthened and extended in order to reach loan disbursement to small farmers and the deprived segments in a convenient manner. With a view to extending credit facility to the areas not covered by special credit programmes, a separate bank will be established as a financial institution oriented towards the needs of the deprived sections.
3. In order to accelerate the pace of poverty alleviation programme, such banks will be required to begin an intensified loan disbursement programme for providing quick and convenient loan facility in least cost to small farmers spread far and wide in villages by appointing loan agents in areas not served by banking offices and co-operatives. The operational modalities of such agents will be decided by the banks and training arrangements will be made for them.
4. while the commercial banks have a great role in the mobilisation of domestic resources, there is a need to increase the pace of resource mobilisation and their utilization for the economic upliftment of the deprived sections. Therefore, the present provision for commercial banks to invest 12 percent of their total investment outlay in agricultural and rural sector will be increased to 15 percent by the final year of the plan. In the event of a failure on part of the commercial banks to disburse that amount, it will be made available in credit to other banks or non-governmental organizations involved in the same sector at a reasonable rate of interest.
5. Support will be extended to making credit facilities easily accessible through co-operatives to agricultural, cottage, and rural industries and other trades as well as to production and marketing at the village level. Similarly, assistance will be provided in the promotion of cooperative financial system in order to mobilize the village level financial sources.
6. Irrigation is a prerequisite for the desired increment in production and productivity, and for adopting integrated farming system in irrigated areas. Therefore, credit will be provided on a priority basis for the extension of irrigation facilities at the farmers' level.
7. In order to commercialize agriculture through diversification in agricultural production systems, special loan assistance will be made available to agricultural technicians, according priority to agricultural graduates. Preference will be given to graduates desirous to engage in facilitating privatization of government farms, conducting veterinary services in the private sector, producing improved seeds and arranging their sale and distribution, operating forest and horticultural nurseries and producing improved breeds.
8. The financial institutions will be accorded full freedom in fixing their rates of interest on credit and deposits with a view to mobilizing internal resources more effectively and making the institutions economically more viable. The system of interest subsidy on loans will be abolished.
9. The small and middle farmers do not usually obtain reasonable prices for their products due to the lack of proper arrangements of sale and marketing. In this context, assistance will be provided to conduct the sale of farmers' production through cooperatives with additional arrangements for farmers to obtain credit to a certain percentage on pledging their output with the co-operatives.
10. As the farmers spread in distant villages have to make several journeys for obtaining a loan, a large part of it gets spent on travel expenses. To redress this situation, arrangements will be made for the financial institutions to arrange for fortnightly or monthly loan clinic or mobile service at various places convenient to the farmers. At the same time, while the total loans required by farmers for various crops or agricultural activities in

a year will be approved as a package at one time, effective and extensive arrangements will be made for the disbursement of loans in installments as and when necessary through the issuance of pass books.

11. Regular training programmes will be organized for increasing the work efficiency of the personnel engaged in agricultural and rural credit programmes. Strengthening the agricultural credit training and research centre operating under agriculture development bank, arrangements will be made for the extension of its training facilities to other banks and agencies participating in the credit programme. For this purpose, a management board will be formed with representatives from other banks, for providing necessary policy directions to the training centre.

Credit programme:

Poverty alleviation credit programme:

a. With a view to providing self-employment and income generating opportunities to socially and economically backward sections such as small and marginal farmers, landless peasants, village artisans, craftsmen, labourers and similar deprived families, the small farmers development programme will be further strengthened and expanded. Under this programme, the production credit programme for women also will be upgraded. Extending convenient loan facility to women who have received skill and efficiency promotion training from women development programme, support will be provided to their efforts in income generating activities. Expanding the small farmers' groups, 25 percent of the total investment to be made under this programme will be directed towards women's groups. This programme will thus provide services to additional 140, 000 deprived poor families during this plan period.. About an average 25 percent of total credit expansion outlay of Agriculture Development Bank will be mobilized under this programme. In new areas to be brought under the programme, non-government organisations also will be encouraged to increase their participation in non-banking programmes.

b. As the commercial banks have a significant role to play in the mobilisation of the domestic resources of the country, 60 percent of the agricultural, rural and cottage industry loans to be disbursed under the priority credit programme of commercial banks will be made available to deprived, poor families. In the event of failure on the part of commercial banks to disburse such loans from their banking offices, the loan amount available will be disbursed through other banks or non-governmental organizations to deprived sections at an interest rate to be fixed by the central bank.

c. In the case of poor, landless peasants, arrangements will be made for banks to provide credit of upto Rs. 10,000 without any collateral. However, such credits will be extended only on the basis of group liability and feasibility of the scheme. The banks will make arrangements for supervising the proper utilization of the credit on a regular basis.

d. Making credit facilities easily accessible to poor, helpless families, they will be encouraged to engage themselves in self-sustainable economic activities. Savings and credit facility programmes will be conducted savings and credit facility programmes will be conducted by promoting such self-reliant groups and cooperatives. In order to promote the participation of non-governmental organizations in these activities, arrangements will be made for these organizations, depending upon their ability, to act as intermediaries for easy disbursement of the bank loans.

Crop production and Commodity Marketing Credit programme:

In view of the farmer's requirement of short term credit to buy improved seeds and chemical fertilizers required for increasing production and productivity of food crops, vegetables, cash and other crops and to pay wages to labourers, necessary arrangements will be made for such credit to be made easily available through various banks. Such credit will be provided on a priority basis in irrigated areas. In those areas where co-operatives have been operating smoothly, credit disbursement to farmers will be made through them. In other areas, the farmers will be provided with loans directly by the banking offices, mobile banking service or bank agents. In order to facilitate the availability of seeds and fertilizers at the village level, co-operatives and private dealers will be awarded credit facility both for the production and sale of seeds and fertilizers.

Agricultural Tool, Equipment and Irrigation Facility credit Programme:

The farmers in feasible areas will be provided with credit facilities for the purchase of manual tractors, thresher, other tools and irrigation equipment such as boring sets and pump sets required for the modernization of the farming system. Upon conducting feasibility studies of the existing water sources in rain fed areas, provisions will be made for the award of individual or group loans for priority accorded irrigation activities and equipment such as small surface irrigation project, roar pump, boring tubewell, deep tubewell and sprinkles etc. this programme will extend irrigation facility to additional 120,000 hectares of land within the plan period.

Energy Development credit Programme:

With a view to accelerating the pace of economic development and attaining a massive extension of small, low – cost energy sources, credit facility will be provided to farmers and entrepreneurs interested in undertaking these activities. Such credit facility will be made available with the objective of preventing the destruction of forests, to individual farmers or groups in the Terai and low hilly region to establish bio-gas plants as alternative energy sources. For promoting agricultural and cottage industries and trade in the rural sector, medium and long term credit facility will be extended to private sector on a priority basis for the development of small hydro-electricity projects through the proper utilization of existing rivers and rivulets. This will make substantial contribution to the agricultural product processing activity in the hills. Necessary credit facility will also be extended for developing various means of utilizing solar and other alternative energy sources.

Agricultural Vocation and Cottage Industry Credit Programme:

With the objective of encouraging the farmers to increase agricultural production by assuring reasonable prices for their products and increasing employment opportunities in the rural areas, necessary credit facility will be made available for extending agricultural and cottage industries. Necessary credit facility will be made to private and co-operative sectors to expand warehousing facility for the storage of agricultural inputs such as fertilizers, seeds and agricultural products necessary for agricultural production. Such credit will also be provided to establish cold stores for preservation of fruits, potatoes and fish etc. and to undertake other agricultural trades in feasible areas.

Livestock, poultry and Fishery credit programme:

Credit facility will be made easily accessible for the promotion of vocations such as cattle farming, buffalo farming, poultry farming, fish farming and the production of their respective improved breeds with a view to increasing the production of milk, meat, fish, and eggs etc. and generating further employment opportunities in the rural sector. Credit facility will be made available in the development of community pasture and grazing fields, too. While extending credit facility for such vocations, priority will be given to the areas with easy access to technical services and to the entrepreneurs capable of arranging technical services by themselves. Arrangements will be made for adequate coordination with different agencies of the ministry of agriculture in the implementation of this programme.

Horticulture credit programme:

In view of the fact that the greater part of the demand for fruits is met through import from India in spite of the good prospects of production of fruits of diverse climatic conditions, a programme has been proposed to extend long term credit facility to encourage farmers to extend fruit farming for a higher production of fruits within the country. Similarly, necessary credit facility will also be provided for the development of fruit and vegetable nurseries. In extending such credit facility, the credit programme will be implemented in coordination with the concerned agency of the ministry of agriculture in areas with easy access to technical services. At the same time, arrangements will be made for providing necessary capital in the form of a loan to entrepreneurs for proper storage, processing and sale of the produced fruits. For proper storage, processing and sale of the produced fruits.

Tea, coffee and sericulture credit programme:

In view of the good prospects of the production of high quality tea, coffee and silk in the Terai as well as the hills of the country, traders, entrepreneurs and farmers of specified areas will be provided with credit facilities. While extending loan for such activities, arrangements will be made for ascertaining the accessibility of technical services and market facility in the concerned areas.

Land Purchase and Housing Credit Programme:

Considering the adverse effect of the dual ownership of land on the production growth, arrangements will be made for abolishing the dual ownership by providing loan to landowner or tenant farmer to purchase the concerned land. Similarly, as has been demonstrated by the experience of small farmers Development programme sectors that landless farmers if provided with land even in tiny plots can earn an income through intensive farming to provide for their families, credit facility will be extended to landless peasants also for buying land. Implementing the programme initially in some specified areas and the areas served by small farmers development programme, the facility will be gradually resources. Similarly, upon assessing their loan repayment capabilities, poor families in those areas will be extended loan for the construction of small low-cost houses.

Forest Development Credit Programme:

It has become highly essential to implement a forest development programme through afforestation to be undertaken by government, private and also cooperative sectors for reducing the adverse impact on natural environment caused by the increased destruction of forests. In this context, necessary credit facility will be made available to individual farmers or groups to grow commercial crops in their own land or in land acquired on lease from the government. Furthermore, the credit flow be directed to the production of private forest based products such as herbs and medicinal plants, too.

Loan Realization Programme:

Special emphasis will be laid on the timely realization of loans as the loan-disbursement capacity of the banks may be constrained in the event of an increase in outstanding loans due to a low rate of realization of the loans disbursed by them. Improvement in the quality of the credit facility of banks and proper monitoring and supervision of the projects implemented with loan assistance will be duly emphasized for making the loan realization programmes more effective. Furthermore, the banks will adopt a policy of allowing a partial waiver on the interest to customers making a timely repayment of their loans and levying a higher rate of interest and charging compensation from defaulters and those making a misuse of the loan.

A credit management, monitoring and evaluation committee will be formed with representatives from Nepal Rastra Bank, Ministry of Finance, National Planning Commission Secretariat and concerned banks in order to assess the regular and uninterrupted study, monitoring, evaluation and assessment of loan disbursement and other aspects of the credit management activities of financial institutions. The committee will, upon reviewing, submit a report in every six months. This arrangement will lead to an increase in the loan realization rate to 70 percent by the end of the plan.

Investment and Realization Target:

Table 21 enlists the investment and realization targets of agriculture Development Bank under the above mentioned programmes. The investment and realization targets of commercial banks are presented in table 22.

Table 21

Investment and Realization Target of Agriculture Development Bank in the Eighth plan Period

(in'000 rupees)

S. No.	Purpose	Investment		Realization	
		First Year 1992/93	Final Year 1996/97	First Year 1992/93	Final Year 1996/97
1.	Small Farmers Development Programme*	471,470	1,158,718	278,000	950,400
2.	Crop development	467,032	1,804,149	566,758	1,849,685
3.	Agricultural Mechanization and Irrigation Development	210,800	583,791	158,500	491,787
4.	Energy Development	73,400	224,072	15,422	105,750
5.	Agricultural and Cottage Industry	209,200	807,169	167,932	584,193
6.	Livestock/Poultry and Fish Farming	211,200	564,144	286,889	665,843
7.	Pomiculture	62,300	212,450	23,108	102,651

8.	Tea and coffee Farming	8,600	111,299	6,703	52,126
9.	Land Purchase and Housing	2,500	7,500	5,629	23,765
10.	Forest Development	500	3,500	-	200
	Total	1,717,022	5,476,762	1,508m941	4,826,400

* Loan disbursement to small farmers will also be made under different headings other than this.

Table 22

Priority sector investment and Realization Targets of Commercial Banks in the Eighth Plan Period

(in'000 rupees)

S. No.	Purpose	Investment		Realization	
		1992/93	1996/97	1992/93	1996/97
1.	Agricultural Sector	282,840	696,480	159,240	480,480
2.	Service industry	122,040	309,360	73,800	210,960
3.	Cottage and Rural Industry	140,400	245,640	132,840	349,560
	Total	545,280	1,251,480	365,880	1,041,000

Women Farmers Development Programme:

The contribution of women farmers in agricultural production is extremely significant. However, while due attention has not been paid to increasing their participation in various agricultural production oriented activities such as technology development, technology extension and training programmes, no arrangements have been made for ensuring women farmers' effective access to production resources and inputs.

There do not exist any effective institutional provisions for the formulation, monitoring and evaluation of agricultural programmes which focus on the improvement of the situation of women farmers and their upliftment. The agricultural programmes conducted by the government and non-governmental agencies have not been very effective for the lack of proper coordination. Similarly, on studies or research have been conducted focusing on women farmers in the agricultural sector. This has led to a dearth of basis data on women farmers activities for the formulation of any concrete agricultural programme for them. Therefore, realizing the need for the development of women farmers against the given background, an agricultural programme will be implemented in the eighth plan emphasizing heavily on the following matters with a view to increasing the role of women in the overall agricultural programme.

- a. Drawing the women farmers into the main stream of the movement for agricultural development, they will also be targeted through farmers' groups in the agricultural development efforts.
- b. Introducing easy procedures for the increased access of women farmers to agricultural production resources and inputs, an increase in productivity will be achieved.
- c. Necessary studies will be conducted to obtain up-to- date data on the role and contribution of women farmers.
- d. Agricultural extension methods and publicity materials suited to the specific needs of women farmers will be developed and publicized.
- e. In order to increase the participation of women farmers in the training programmes to be conducted in the agricultural sector, the practical problems being faced by women farmers will be given due recognition and the training programmes will be made more effective accordingly.
- f. Giving priority in making the respective production process market oriented, the income generating vocations will be implemented which call for greater involvement of women farmers in agriculture, such as fruit orchard and nursery development, vegetable and tea farming, been keeping, mushroom, silk and fish production,

livestock/poultry, farming of duck, chicken, goat, pig and rabbit etc. farming of duck, chicken, goat, pig and rabbit etc. and production and processing of nutritious foods.

g. The women farmers development unit of the ministry of agriculture will be strengthened and activated to undertake the task of coordinating, supervising and monitoring the development programmes for women farmers being conducted in the kingdom.

h. Thus, during the eighth plan period, the programme will be conducted in such a manner that the farmers' groups to be constituted under various programmes pertaining to food crops, cash and industrial crops, fruits and vegetables, livestock/poultry farming, seed production etc. will comprise 30 percent women's groups by the end of the plan. Making necessary infrastructure arrangements, the participation of women farmers in training programmes will be increased to 35 percent by the end of the plan period.

Planning, Monitoring and Evaluation:

For successful implementation of agricultural development programmes, it is necessary to strengthen the implementation aspects through proper plan formulation, collection of accurate data and their analysis and constant monitoring of the implementation of approved policies and programmes. Therefore, with the objective of effective implementation of all agricultural development programmes, the planning, monitoring and evaluation aspects will be mobilized as follows.

a. A planning, monitoring and evaluation unit will be developed as an institution at an appropriate level for activating the planning, monitoring and evaluation processes from the centre to the grass root level.

b. A programme will be conducted to enhance appropriate capabilities for adopting the practice of formulating a district level agricultural development programme on the basis of the realities obtaining in the district and implementing it as a project. In formulating such plans, due attention will be paid to the incorporation of the aspirations of the local people based on the local resource endowment and converging them with the national level directives from the center concerning the resources and assistance that may be obtained from the centre in a national prospective.

c. Norms and indicators will be developed for plan formulation, monitoring and evaluation of programmes and projects as well as of their policies, which may provide guidelines for future plan and programme formulation, too. A system will then be established for monitoring and evaluation of the implementation aspects on their basis. In such monitoring work, priority will be given to that of supply and distribution of production inputs. Assessing the realities of implementation aspects through the field visits, local problems will be dealt with immediately and progress review and achievement as well as impact evaluation will be conducted on a continued basis.

d. With a view to strengthening the privatization policy, an approach will be adopted to involve the private sector to the greatest possible extent through the media of cooperatives, non-governmental sector, private entrepreneurship and traders and joint investment ventures. Necessary studies and analyses will be conducted on the feasibility of handing over, upon assessment, government farms and other activities to private sector. Necessary working paper propounding sufficient grounds for such transfer will be prepared and invitation will be extended to private sector. Studies will also be carried out on the activities deserving termination or the strengthening of those which need to be continued by the government sector.

e. In view of the growing demand for wool in the carpet industry, appropriate programmes will be conducted for the production of wool required for producing carpets in the country on the basis of the feasibility of expanding the number and breeds of sheep and available pastures. Emphasis will be given on conducting this feasibility study in the first year of the plan.

f. The role of the government sector is primarily to act as a catalyst to the promotion of private sector and to identify, upon careful monitoring of the private sector activities, such areas that requires support and assistance. Accordingly, arrangements will be made for monitoring of the impact of agricultural policies on those activities on a regular basis, for exploring the way and means of increasing investment efficiency, for formulating suitable annual programmes, for supervising the work performance of various units engaged in programme implementation and for evaluating the agricultural-workers correctly using both reward and punishment approaches.

Manpower Management:

Re-considerations will be given to making the existing manpower and organisational structures more alert, dynamic and efficient in keeping with the policy of development administration for the supply of manpower required for programme implementation. In this perspective, any recruitment of personnel, in the event of any additional requirement, will be made only if the requirement can not be met through any adjustment in the existing manpower.

Development Expenditure Arrangements:

A development expenditure of Rs. 10,947 million has been projected for agricultural development during the plan period. A projection of the sub-sectoral allocations of agricultural development outlay is presented in table 23. The share of foreign aid in the sources of financing the development expenditure is estimated to remain at 60 percent at the **present rate**.

Table 23
Allocation of table agricultural Development
Outlay for the eighth plan

(in millions of rupees)

Programme Areas	Total
1. Agricultural Extension and subsidies (Agricultural Inputs)	
1.1 Food Crop and cash crops	5,035.6
1.2 Livestock	1,434.1
1.3 Fruits	919.5
1.4 Fishery	273.6
2. Agricultural Research	1,182.3
3. Agricultural Education and training	437.8
4. Agricultural Marketing and price Management	437.8
5. Agricultural Statistics and Analysis	164.3
6. Cooperative Development	131.5
7. Planning, monitoring and Evaluation	10.98.5
8. Food technology	54.8
9. Agricultural and Rural credit	766.3
Total	10,947.0

Implementation Arrangements:

Arrangements pertaining to the implementation of various agricultural programmes have been dealt with in foregoing chapters on policy and programmes. A synopsis of them is presented below.

1. The agricultural production programmes will be implemented at the initiative of farmers, agro-entrepreneurs and traders. The government sector will be responsible for providing training, extension of improved technology and other technical services.
2. Priority will be given to the private sector, leader farmers and commercial entrepreneurs to undertake the task of production and distribution of improved seeds, seedlings, plants and breeds required for agricultural production. The programmes will be implemented in such a manner that the government sector will undertake, in the event of the absence of any initiative from the private sector, leader farmers or entrepreneurs, to arrange for the production of those inputs by commercial entrepreneurs and to extend support services along with the monitoring of quality standards of the production.
3. Agricultural research will be promoted as an autonomous unit under the Nepal agricultural Research council Act and the council will undertake agricultural research work in a national perspective.
4. Programmes will be implemented, according priority to the participation of the private and cooperation sectors, for the management of market facilities and for agricultural products and inputs to ensure market and reasonable prices for them. The government will be confined to the role of a guide to monitor the quality and the appropriate prices obtained by the farmers for the sale of their production, and implement necessary policy measures upon their analysis.

5. In order to provide financial support to private and cooperative sectors to conduct production programmes, the investment programmes of Agriculture Development Bank and other financial institution will be duly mobilized.

6. The district agricultural development plan and programmes will be developed as reconciled programmes based on the bottom-up identification of local problems, feasibilities and needs of the farmers and the top-down information of national requirements, guidelines and public resources to be made available. They will be mobilized in accordance with the system of decentralization.

7. For successful implementation of agricultural development programmes, arrangements have been made for coordination in various activities from the formulation stage to the implementation and evaluation stages by establishing an agricultural development co-ordination committee. The committee possesses affiliated agencies from the centre and district to service centre levels. Arrangements have also been made for carrying out of all agricultural programmes other than research to be brought under an administrative umbrella.

8. Of all the above mentioned agricultural development programmes, the government sector programmes will be implemented in necessary coordination with Department of Agricultural Development, co-operative Department, Various Committees, Nepal Agricultural Research Council and also with other government agencies, private sector, co-operative sector and other non-governmental sector through government owned corporations. The ministry of agriculture will be responsible for overall co-ordination among the programmes and their implementation.

B. Forestry Resource Development:

Present Context:

The situation of the forestry sector, a significant national resource endowment, has been deteriorating rapidly due to the increased population, haphazard utilization and encroachment during the last few decades, negligible people's participation and many other factors. The lack of awareness of the significance of forestry resources among the people and the erroneous approach of the government that the total safety of forests can only be undertaken by the government sector are also the reasons behind the massive encroachment and destruction. Similarly, the decline in local participation in forestry development can also be said to have resulted from the impression among the people that the government would move in once the forestry sector became productive and because of the priority accorded to political reasons rather than social development in the utilization of forestry resources. It does not seem likely that any improvement can be brought about in the forestry sector without getting rid of these negative factors and creating a positive attitude among the people.

The haphazard clearing of forests has led to a gradual degradation of ecological balance giving rise to soil-erosion, flood, landslides, drying up of the water springs, decline in agricultural production and similar other happenings in the country. On the other hand, when viewed in the context of population, accessibility and forest, there is an imbalance between human settlement and forest in spite of the fact that more than one third of the landmass of the country is covered with forests. Consequently, while there have occurred an increased deterioration in environment owing to the widening distance between forests and densely populated areas, there exists a different problem in certain areas where the forestry resources face degradation because of the lack of utilization. The burning need of the day is, therefore, to strike a balance among the conservation, development and utilization of the forestry sector on the whole, and to make arrangements for appropriate land use and a sustainable supply of necessary forestry products through increased faith and participation of the people.

Progress during the seventh plan and F.Y. 1990/91-1991/92

There does not seem to have been any significant development in the forestry sector during the seventh plan. The plan had laid special emphasis on afforestation but during the plan period it was only in a total area of 99,173 hectares that tree plantation was accomplished in various sectors including public forests, community forests, private forests and leased forests. Similarly, the figures for the distribution of improved stoves stood at 50,000 nos. the processing of resin at 7,400 m. tons, the expansion of medicinal herbs/plants farming in private sector at 435 hectares and the production of rosin and turpentine at 6,400 m. tons. The rate of progress in soil conservation, national parks and the production of wild life is also quite insignificant. The respective programmes appear to have achieved grass planting in 86 hectares, terrace improvement in 261 hectares, 162 non. Of gully control and the protection of 128 water sources.

Towards the end of the seventh plan, a forestry sector master plan was prepared, and consent was given for its implementation by his Majesty's Government. However, in the subsequent period (1990/91 and 1991/92), too, there does not seem to have been much progress made in the specified programme. In this period, the achievement figure are estimated to have stood as follows: Tree plantation area-approx. 23,656 hectares, distribution of improved stoves-7,500 tons;, processing pf herbs and aromatic plants-683 tons, resin processing - 5,100 tons, rosin and turpentine production- 4,500 tons, extension of herbal and medicinal plants farming in the private sector-137.5 hectares, improvement of terraces-317.7 hectares, grass plantation-43.3 hectares, protection of water sources-97 nos. and gulley control-59 nos.

Problems and prospects:

In spite of the passage of a considerable stretch of time if several five year plans, there still persists the lack of coordination among forestry, agriculture, live stock farming and energy policies as well as other public consumption sectors. For instance, while in some densely populated areas with higher demands for timber, fuelwood and fodder, the accessibility to forest or cutting down of forests giving rise to various problems such as soil-erosion, flood, landslide and drying up of water sources etc., in other areas the forestry resources have been wasted because of the lack of proper utilization. There still does not exist any efficient and responsible agency to develop pastures and other fodder sources at the national level. There is the absence of any long-term policy to determine areas for forestry, cultivation and pastures on the basis of appropriate land use, and there have surfaced a conflict of interest between inhabitants and the park authorities in the areas where the national parks are located. Similarly, while the policy of public participation in forestry is not attractive enough to the participants in terms of direct benefits to them, the policy of arranging a supply system in the past without due attention to the indicators of the market has not only led to undesirable deforestation but also enfeebled the industries and undertakings based on energy and forestry products. The system of providing forest guards to community forests by the government has in itself become a hindrance because of the high cost involved in it. Similarly, it is realised that the lack of coordination among the programmes of foreign associations and agencies has also affected the development efforts in forestry.

As regards the feasibility of forest development, there exist more than 3 million hectares of degraded forests, shrubs and open land with the potentiality of afforestation or pasture development. They afford us potential opportunities for achieving considerable growth in forestry products as well as agricultural production and productivity provided they are developed into community and lease hold forests or pastures for livestock. Besides, if a policy is adopted to target the deprived sections for the award of lease hold forests, considerable improvement can be brought about in their means of subsistence and employment. A planned management and market oriented utilization of natural forests will not only reduce the pressure on the forestry sector but also impart flexibility to public parvenu accompanied by a considerable growth. Similarly, land conservation and watershed management efforts will help control the currently noticed rate of decline in agricultural production and thus extend support in environmental protection. The objection of the forestry sector in the eighth plan have been determined against the backdrop of these constraints and feasibilities.

Objectives

1. T bring about stability in the supply of timber, fuelwood, fodder and other forestry products necessary for common people in their day-to -day life.
2. T augment the productivity of forestry products and ensure the supply of raw materials to forest-based industries with a view to contributing to the national economy.
3. T increase the income and employment opportunities from the forestry sector to numerous small and marginal families.
4. T develop national parks, wild life reserves and protected areas for the conservation and promotion of bio-diversity and to create lovely natural recreational areas.
5. To help maintain land fertility through the prevention of soil erosion and degradation of watershed areas.

Policies

In formulating forestry policies, it will be appropriate to view the forest management and development activities in the context of demand and supply aspects. While the demand can be oriented towards an economical use of fuelwood through a market-oriented process or the development of an alternative source of energy, the supply system can be made more effective through the development of a technology for achieving economy in the use of fuelwood and the promotion of community, leasehold and private forests. Hence, the forestry policies have been determined as follows in keeping with the objective of drawing the demand and supply aspects to a converging point. At the same time, the constraints identified by the master plan adopted in the past and those currently experienced by concerned government and non- governmental organizations and agencies have also been taken into full consideration.

1. Appropriate programme will be introduced to reduce the distance between forests and population. Priority will be given to the development of such forestry products which can make significant contribution in meeting the basics needs of the people. For this purposes, the development of fast growing trees, folder trees and grass having nutritious element of increased milk production and forest resources useful in making agricultural tools will be emphasized in the areas adjacent to densely populated human settlements.
2. Classifying the existing public forests into national forest, community forest and private forest according to the concept of protected forests and productive forests, forestry management and development programmes will be implemented with increased participation of the community, non-governmental associations and agencies. Accordingly, practicable rules will be formulated as soon as possible with regard to the utilization of forestry products.
3. Since the entire responsibility concerning community forests will be handed over to the user groups, the provision of forest guards for community forests from the government sector will be discontinued. This provision of guards as it has proved unproductive causing a further strain on the expenditure for forestry development and creating a psychological impact among the people that the forest still longed to the government.
4. In order to economize on the forestry management costs, the Royal Nepalese Army Security guards will be stationed only in the extremely sensitive areas in terms of security.
5. Agro-forestry and farm forestry will be encouraged for the supply of timber and fuel wood required in the urban sector. For this purpose, incentives will be provided to the development of industrial forestry in the Terai and hilly areas a decent to industrial sectors and to tree plantation along field boundaries and terrace ridges. Fodder tree saplings required for livestock development programme will be supplied in cooperation and coordination with forestry management programme.
6. In order to gradually decrease the dependence on public forests, arrangements will be made for the forestry-based industries to produce their requirements of raw materials in private or lease hold forests.
7. While allocating long term lease hold forests preference will be given to small and marginal farmers for increasing employment opportunities for them through the development of forestry based vocations and the increase in forest products from this sector. In the allocation of lease hold forests to other sections of society, priority will be given to the establishment of resorts, priority will be given to the establishment of resorts, medicinal plants and herb farming, rearing of insect medicinal plants and herb farming, rearing of insect moths and other wild creatures based on forestry and the production of raw materials such as timber and fuel wood required for industries associated with the lease holder of the forest area.
8. Consumers will be motivated to economize on and make proper utilization of forestry products by adopting area-specific market-oriented pricing policy and by developing alternative means and sources.
9. Concerned producers will be granted autonomy in the marketing and export arrangements of their forestry products such as timber, fuelwood and medicinal herbs and plants obtained from their private, community or lease hold forests.
10. Public participation will be encouraged in the prevention and control of the loss of life and property thorough landslides and floods, and preference will be given to tree plantation and their protection along the river bank and in the watershed areas of the existing and potential large hydro-electric and irrigation projects with a vies to conserving the water sources.
11. In order to bring about dynamism in the management of national parks, protected forests and will life reserves of national importance and to enhance people's faith in them, public participation will be promoted in

their management. By establishing a separate fund of such reserves, a part of the revenue generated will be spent on their development while the other part will be used in generating local employment opportunities.

12. Steps will be taken to control the degeneration process of vegetation and their excessive utilization by human beings and animals in order to transform the fast degrading land mass into fertile areas.

13. The present forestry statistics are unreliable and without reliable data no plan can be formulated, monitored or evaluated efficiently. Therefore, the forest survey and statistics unit will be further strengthened in order to refine the data collection processes.

14. Forestry research will be geared towards generating increased income and employment, giving priority to the production of forestry-products that help meet the basic needs of the people.

15. In order to control the loss of forestry resources through forest fires, studies will be conducted on the nature and multiple causes of such fires and programmes will be implemented to arouse awareness among the people.

Targets and programmes

Community Forest Management

With the objective of catering to the local inhabitants' needs of forestry products through local management and augmenting local income and employment opportunities, a programme will be implemented for the establishment of community forests under the programme, 5,000 users' groups will be constituted and additional 252,000 hectares of community forests will be transferred to users' groups during the plan period. Technical and management counseling services required for the development and management of community forests will be provided by district forest officer and Ilaka(area) forestry programmes under the Department of Forestry. The authority and responsibility of maintaining the books of accounts of community forests will also rest with the concerned communities or users groups.

Leasehold Forest Management:

The forest and shrub areas adjacent to villages which are not taken over by any community for community forests, and certain appropriate sections of national forests will be provided on long-term lease to small farmers and deprived families on a priority basis. This may lay the foundation for the policy of the present government that employment opportunities for deprived sections should be gradually increased in future through forestry, livestock farming and forest-based crop farming such as silk and cardamom. Similarly, while allocating leasehold forest to other sections, priority will be given to the establishment of forest-based industries, farming of medicinal herbs and plants, rearing of insect moths and other wild creature based on forestry, livestock farming and the production of raw materials required for industries associated with the lease holder. Apart from making timely legal reforms, the non-governmental organizations also will be involved in the task of lease hold forestry. During the plan period, 25, 000 families will be involved in this programme.

National Forest Management

The management and development of all public forests other than those handed over as community and lease hold forests will be undertaken by national forestry management under the Department of forestry of his Majesty's Government. Intensive forestry development programme will be introduced by formulating five to ten year forest working plans in the important and productive forests of the Terai and inner Terai regions on a priority basis. For this arrangements the technical personnel and forest guards to perform their duties will be made working residing in the concerned forest areas. During the plan period, this programme will be launched in 628,000 hectares in 40 districts.

Private Forest Management:

Since the major parts of the productive forests suitable for agriculture and human settlement have already met with destruction in the Terai and the middle hilly region, a programme will be launched in these areas for industries, associations or individuals desirous to begin private forestry with tree plantation in private land. In order to intensify private forestry his majesty's government will provide technical counseling and assistance in addition to training in forestry management and the supply of improved seeds and saplings. Furthermore, the area

under private forestry will be exempted from land ceiling and full autonomy will be granted in the sale of forestry products from such private forests.

Soil and Watershed Management Programme:

In order to control natural calamities such as soil erosion, floods and landslides and bring about improvement in the water deposits and hydrological balance, tree plantation will be undertaken along the river banks and in the watershed areas of large hydropower and irrigation projects. In addition, integrated soil and watershed management programmes will be implemented in such areas on a priority basis mobilising the local resources with peoples' participation in coordination with agricultural and irrigation programmes in the concerned watershed areas. Technical assistance will be provided to this programme from, in addition to the nearest soil conservation project site, the forest, agriculture and irrigation offices of the district. Similarly, with a view to making the extended technical services more effective, operational research work will be undertaken on a regional basis and programmes will be conducted to raise awareness about soil erosion and soil conservation among the general public.

The churiya region, which is ecologically very fragile and not very well suited to cultivation, will be declared a specially protected area and a prepare programme will be launched for the conservation of soil as well as flora and fauna of this region.

National park and wild life Reserve Programme:

In view the significant role of forests, vegetation and wild life in environmental conservations, national parks, wild life reserves and protected areas will be established and maintained at various representative geographical areas, and studies and research will be carried out for their further development. To reduce possible discord between local residents and national parks and reserves, public participation will be promoted in their management and a share of the generated revenue will also be spent on developing local employment opportunities while the remaining share will be used in the promotion of the concerned parks and reserves.

Development Programme for Forestry-based Industries

It is estimated that 2,000 to 3,000 million rupees worth of forestry products such as timber, fuelwood, foliage, bamboo, cane, herbs and medicinal plants among others are being consumed annually within the country. If some of these products could be processed and industries operated, they could contribute immensely to employment generation as well as national income. Therefore, training and credit facilities will be extended to encourage the private sector to undertake the development of small or large scale forestry-based industries in various districts. In the areas lacking in private sector initiative, the option of establishing industries in the government sector will be considered. Such industries will be encouraged to undertake tree plantation in leased or private forests for the supply of their requisite forestry products, thus reducing the dependence on public forests.

Forestry and Botanical Research

Although some research has been undertaken in the way and means of increasing productivity in natural forests, afforested areas, and in the search and utility of some plants, the applied practicable research has not made any considerable headway in the conservation, promotion and proper utilization of forests and their flora and fauna and the ways of increasing income and employment opportunities for farmers. Therefore, the research will now be made more result-oriented, emphasizing on the subjects of practical utility to the concerned agencies, and several sub-programmes also will be conducted in association with other study and research associations and institutes.

The programmes to be conducted under forestry research and technology development will mainly focus on the following matters.

- a. To undertake appropriate research for the rehabilitation of degraded forests, shrubs and pastures.
- b. To develop and conduct technical tests for the development of forestry for different uses as well as for the promotion of important forests from the view point of income and employment generation.
- c. To carry out studies on plant regeneration.

- d. To conduct research for the development of agricultural, forestry and silvipasture etc. closely associated with the farming system.
- e. To carry out research in and publish feasible schemes for the development of forestry products of high export potential such as medicinal plants and herbs, aromatic oils and saffron.

Natural Environment Programme:

Although environmental protection is a multidimensional activity, in the present five year plan programmes for the protection of natural environment will be conducted within the forestry programme. Maintaining close contact and coordination with the ministry as well as other government and non-governmental agencies, appropriate studies, research and remedial work for the conservation of the forest and forest related ecology will be conducted as follows.

- a. The forest and shrub areas will be mobilized to the strengthening of the economic condition of landless and marginal segments of the farming population. In this regard, steps will be taken towards the creation of necessary infrastructure for the farming of wild life, insects and animals (deer, rein deer, wild boar, butterflies and silk worms etc.) in the forestry areas involving the participation of the above mentioned segments.
- b. Upon surveying and identifying the degraded and degrading Land areas, programmes will be implemented for their rehabilitation. At the same time, the laws formulated with regard for their conservation will be effectively implemented.
- c. Conducting feasibility studies on the development of practical alternative source of energy, programmes will be conducted for the extension of appropriate technology to the village level. Proper coordination will be maintained with different agencies including the Ministry of water Resources in the implementation of these programmes.
- d. The central zoo will be made more attractive by making the cages more hygienic and spacious.

Sectoral Support programme

In order to ensure the smooth implementation of the above mentioned programmes and their affiliated activities to be conducted by various government and non-governmental agencies and organizations, the following support services will be launched by the Ministry of Forestry and Environment of His Majesty's Government.

Survey and statistical Adjustment

Since the data on forest and forestry products are maintained only at the district level and there I no provision of adjusting or updating them at the centre, It is necessary to strengthen the forest and forestry product statistics system at the central level. The following activities will be undertaken with regard to the collection and adjustment of the forestry data.

- 1. A separate data unit will be established under the survey and statistics division of the Ministry of forestry.
- 2. The data on forestry resources and their utilization will be computerized and the bases for estimates for the users not covered by date collection will be reviewed.
- 3. The forestry resource and utilization statistics will be published annually.

Forestry Extension and Control of Forest Fires:

A coordinated forestry extension programme will be conducted focusing on community, private and lease hold forests and the prevention and control of forest fires. As the forest fire is emerging as one of the major causes of the destruction of forests, it has, in reality, become necessary to conduct a separate nation wide programme for its control and prevention. In the first two years of the plan, studies will be undertaken on various aspects of forest fires in order to facilitate the formulation of an appropriate plan, and on the basis of the recommendations made by the studies a separate programme will be implemented for the control and prevention of forest fires.

Training

In order to enrich the knowledge, skill and out look of the personnel engaged in the development of forestry resources to suit their changed role in the context of the new forest policies, in service training programmes will be organized at the coentre. Likewise, other trainings in coordination, monitoring and evaluation aspects will be conducted at the district and regional levels. In addition, appropriate training programmes for common people will be organized to promote community, private and lease hold forestry in keeping with the new policies. Necessary assistance will be provided to training programmes by developing training course outlines during the plan period. Training courses will be so designed that they promote the extension of community and lease hold forestry.

Major physical targets

Some major physical targets of the forestry resource development programme are presented in table 1.

Monitoring and evaluation

The programmes to be implemented for the development of forestry resources and the inter-programme as well as inter ministry co-ordination aspects will be closely monitored and evaluated. Fore this purpose, the existing monitoring and evaluation division will be further strengthened and activated.

Manpower Management

Arrangements will be made for additional personnel required for carrying out the forestry resource development programme if the requirement cannot be met through manpower adjustments in keeping with the policy of the development administration.

Development Expenditure Provisions

A sum of Rs. 5,372 million has been projected for the forestry resource development in the plan period. Among the sources of finance, foreign assistance is expected to constitute about 50 as of percent.

Allocation of Total Development outlay for Forestry Resource Development in the Eighth Plan

(In millions of Rupees)

Prgrammes Areas	Total
1. Community and private Forests	2500.7
2. National and Leasehold Forests	883.3
3. Forest-based Industries	23.8
4. Herbs, Medicinal and Aromatic Plants	171.6
5. Ecological system and Genetic Resources	506.8
6. Soil conservation and watershed Management	900.0
7. Policy as well as legal and Institutional Reforms	10.0
8. manpower Development Training	54.8
9. Forestry Research and publicity	255.4
10. Forestry Resource information and plan formulation	35.0
11. Mnitoring and Evaluation	20.0
12. Environment	10.6
Total	5372.0

Implementation Arrangements

The implementation arrangements for various programmes to be undertaken within the eighth plan period have been enumerated on their respective chapters. A synoptic account of those arrangements is presented here as follows.

1. In the course of implementing the Eighth plan, various forestry sector programmes will be conducted at the central and district levels. While the forestry development programmes involving community forests, private forests, national forests, leasehold forests, and soil conservation and watershed management programmes research, publicity, environmental programme, the policy, legal and institutional reforms and manpower development training programmes will be conducted at the central level.
2. While the community forestry, leasehold forestry and private forestry programmes will be operated entirely at the initiative of a community or individuals, arrangements will be made for the training as well as technical and management counseling service to be provided from the government level.
3. The soil conservation and watershed management programmes will be implemented with public participation mobilizing the local means and resources. Emphasis will be given on the technical support services to be provided by the government sector.
4. The government will take the initiative to launch the national forestry and wild life reservation, forestry and botanical research, and natural environment programmes as well as other support service programmes such as survey and statistical adjustment, publicity and training etc.
5. The forestry resource development programmes to be conducted by the government sector will be implemented by the concerned departments in co-ordination with other government agencies, private sector, cooperative sector and non-governmental agencies. The Ministry of Forestry and Environment will be responsible for overall coordination and implementation.

c. Land Reform and Management

Present Context

The primary basis of the country's production is the agricultural sector. The poverty prevalent in Nepal is also mainly linked up with agriculture. More than 50 percent farming families possess less than half a hectare of land and their economic condition is considerably low. A system of equitable distribution of productive resources and production is required for achieving production growth in the agricultural sector. As land is the primary source of production, it is obvious that there should be reforms effected in the land system so as to mobilize it in the context of bringing about an increase in agricultural production and poverty alleviation. However, the available land data required for any land reform activity are insufficient. The cadastral survey initiated more than two decades ago is yet to be completed in nearly 13 districts. Although the land revenue records show the tentative areas of land under individual ownerships, aggregate data of individual land ownership in the kingdom are not available, and no effective land reform programme can be formulated in the absence of such data. Land, on the other hand, is a very sensitive issue. Therefore, while attempting any reforms in the land system it will be advisable to adopt practicable people-inspired and spontaneous market oriented process with public participation rather than using any government authority or coercion.

No land reform programme can be self contained in itself; it is necessary to provide developmental support services in agricultural extension, training, research, agricultural inputs, agricultural credit, irrigation and marketing etc. As concomitants of land reform programme. Viewed in another perspective, the assumption that the imposition of a land ceiling through land reform and the that the imposition of a land ceiling through land reform and the automatic guarantee of tenancy right to tillers will support the deprived sections has been rendered doubtful by the experience across the globe. A legislative measure of lowering the land ceiling may in all probability result in the transfer of the ownership of some land from a land owner with a large landholding to middle class individuals rather than to small farmers because of their respective financial capabilities. Similarly, the provision of automatic tenancy right to tillers may create a destabilized situation in the society where the land may lie uncultivated and the poor and landless peasants may be deprived of the social opportunities of earning a living by tilling land, instead of increasing the production, which may discourage the investment in agriculture resulting in a negative impact on productivity and employment situation.

Similar conditions prevail in the 'deve guthi' (land allocated to holy shrines) systems, too. If the tenants only are patronized, there is a danger that a situation may arise due to the lack of funds where the traditional worship and guthi maintained through generations may come to an end. On the other hand if the guthis are given preference,

the tenants may be heavily burdened any may not be able to pay the tax, too. These things need to be taken into consideration in formulation programmes in the eighth plan.

Progress during the seventh plan and F.Y.1990/91-1991/92

The main activities undertaken during the seventh plan period were updating the records of the tenants and routine settlement of land disputes; the incorporation of 40 hill district land reform officer into the land Revenue Department of cup down the administrative cost in view negligible number of tenanse and the absence of land above the ceiling in those districts; the return of a total of Rs 98,342,000 inclusive of principal and interest by the end of plan in continuation of the process initiated in 1988/98, out of the total of Rs. 140 million raised an compulsory savings upon the introduction of land reform programme; introduction of registration fee exemption as an incentive for consolidation of the plots of land; settlement of 15,970 tenancy right disputes out of the total 40,510 cases lodged within the plan period, and the transfer of 13,669 ropanis in the hills and 231 bighas in the Terai of guthi land to freehold ownership. Similary, in the survey sector, survey of additional 510,000 ha. of land was completed raising the number of surveyed district to 57;34,384 geodetic survey points were erected; altogether 540 senior and junior level surveyors were trained; and some additional survey and mapping work was carried out.

As regards the achievements of F.Y. 1990/91 and 1991/92, a total of Rs. 50,257,000 of the saving programme inclusive of interest and capital was paid back; 3,894 ropanis of guthi land was transferred to free hold land; surver was completed in 5 districts and initiated in another 6 districts, 338 bighas of land above the land ceiling was acquired and distributed, 28,402 tenancy right dispules out of 49,044 lodged in the period were settled; Rs. 2,400,000 worth of saving loans were realized from debtors who had not made any payments before; and training for 156 junior level and 11 senior level surveyors was complete.

Objectives

Against the given background, the main chief objectives of to Eighth plan with regard to Land Reform and Management have been determined as follows.

1. To achieve an increase in production and productivity through the equitable distribution of agricultural land.
2. To discourage the tendency of holding excessive land in agriculture and divert the investment to non-agricultural sectors.
3. To update maps and land ownership date regularly by determining actual lad areas.

Policies

The following policies have been formulated for achieving the targeted objectives:

1. As the dual ownership of land registered under tenancy system discourages the tiller tenant farmer to make large investment on farming leading to reduced production, the dual ownership of land will be abolished once for all through equitable means.
2. They system of guthi land and tenancy right also will be treated in a per with that of a land owner and a tenant. The land above the tenant' share will be sold to him at prevailing prices, if he so desires, or to and one else and the proceeds of he sale will be used to establish a revolving fund to run the guthi and undertake investments.
3. Survey programmes will be concentrated on activities designed to update records on the actual areas and ownership of land and to prepare maps of various types.
4. Assembling all information received from land survey, and intergrated land information system will be developed to support decision making.
5. I order the create favorable circumstances for equitable distribution of the country's land and promote commercial farming in the excessive land held by some people in agriculture, the existing systems of inequitable distribution and land ownership ceiling will be examined and the tendency of occupying excessive land will be controlled through progressive taxation system.

6. Land acquired by decree also will be brought within the domain of prevailing land ceiling.
7. Cadastral survey records will be computerized at the earliest possible so as to simplify the land tax payment processes and implement the progressive taxation system. Providing an easy access to land ownership details within the kingdom, it will help the government in identifying the deprived sections and in formulating plans to support them.
8. Incentives will be provided in registration fees to encourage the consolidation of the plots of land and to promote the transfer of the ownership of land to small farmers.

Targets and programmes

Abolition of Dual Ownership

The land presently under dual ownership with tenancy right will be distributed between the landowner and tenant through equitable means. Laws will be made at the initial stage of the plan for means. Laws will be made at the initial stage of the plan for allowing some time, with the consent of land owner, to the tiller to buy the share of the land owner, if he desires, and only if he fails to make the purchase, the division of the land will be undertaken. Farmers will then be free to obtain land for cultivation from the owners on a contract basis. This will clarify the situation removing doubts and the tenancy system will then be abolished once for all. This will also help increase employment opportunities for landless peasants.

The tenants of the guthi land also will be treated in the same manner as in the case of a land owner and a tenant upon granting his share to the tiller, the tiller, the remaining share will be sold to the tiller himself, if he so desires, or to somebody else at the prevailing price. A part of the proceeds from the sale will be used to establish a revolving fund and another part will be invested in income generating activities such as construction of a market complex or Stalls to continue with guthi worship rituals and undertake repair, maintenance and renovation works etc.

Computerization of Land Ownership Records and simplification of Land Revenue Payment

Land ownership records will be computerized in all districts within the next two years. Introducing computerization in 25 districts in F.Y. 1992/93, all land ownership records and land revenue payments in the districts that have been surveyed will be computerized for the purpose of simplification within 1993/94. To update the land records at central level, mini main frame computers will be arranged at the centre by 1993/94.

Enforcement of practical land ownership ceiling

After computerizing the land data, progressive taxation system will be introduced. This will create a saturation in which the occupation of land area larger than specified will be expensive in practice. Maintaining the present land ceiling in operation, a practical land ownership ceiling will be fixed for progressive taxation purposes. Incentives will be provided in registration fees, if the owner of the land above the ceiling wishes to sell the land to a small farmer with land area less than specified. This process, on the one hand, will not hinder the retention of land area above the ownership ceiling for commercial farming on the payment of progressive taxes and on the other, it will create a situation conducive to the transfer of excess land held by land owners to the lower sections of the society.

Consolidation of land and prevention of Fragmentation

Registration fees will be waived to encourage consolidation of land and create conditions for higher productivity. Similarly, in order to prevent the excessive fragmentation of land beyond a specified limit, a minimum size will be determined upon conducting a socio economic study on the minimum size specifications in F.Y. 1992/93.

Preparation of Maps

The formulation and implementation of land reform policies will be facilitated with the determination of actual land area through scientific survey and mapping. For this, various programmes will be implemented to prepare maps in deficient scales inside the country required for different purposes, to complete the cadastral survey work in remaining districts; to determine necessary geographical points necessary for mapping; and to prepare skilled manpower required for survey and mapping work. A feasibility study will be undertaken in coordination with

concerned agencies to initiate graduate level studies in survey. As the private sector involvement in these survey and mapping work is going to be encouraged, annual programmes will be implemented with their participation. The major targets in the eighth plan with regard to survey are presented in table 1.

Monitoring and Evaluation

The land reform and management programmes will be made highly effective through efficient monitoring and evaluation.

Manpower Management

The manpower required for the implementation of the land reform and management programme, will be mobilized in accordance with the policies of the development administration.

Development Expenditure

A total expenditure of Rs. 791 million from the public funds has been allocated for the land reform and management programmes in the eighth plan period. Out of this amount, Rs 230 million is allocated for land reform, Rs. 61 million for the establishment and development of integrated land information system, and Rs. 500 million for survey programme. As regards the sources of finance, foreign assistance also will be used in feasible areas.

Implementation Arrangements

The proposed land reform, survey and the establishment of land information system programmes will be conducted in the governmental sector by concerned departments in coordination with concerned agencies. The Ministry of land reform and management will be responsible for overall coordination among departmental programmes.

Table 1

Major survey targets

Programme	Unit	Target
1. Cadastral Survey	Hectare	200,000
2. Improvement of old Maps and tracing	Nos.	5,000
3. Micro filming	Nos.	2,500
4. Data card inking	Nos.	35,000
5. Geodetic Survey points	Nos.	35,000
6. Astral Survey	Groups	500
7. Gravity survey	Points	500
8. Levelling survey	K.M.	600
9. Preparation and printing of medum Scale maps	Sheet	215
10. prepreparation and printing of school atlas	Sheet	19
11. Survey work for map preparation in large scale	Hectare	50,000
12. Land source maiiing (gransparence sheet)	Sheet	154
13. Aerial photography	Sq.km.	57,980
14. training - basic	Nos.	150
- junior	Nos.	175
- senior	-	30
15. Preparation of topographical base map of Lumbini zone	-	Entire Zone

Appendix-1
Projection of the Number of Tourist Arrivals and
Foreign Exchange Earnings

	Number of Tourist Arrivals			Foreign Exchange Earnings (in Millions of American Dollars) at constant Price
	third Countries	Indian	Total	
1986/87	181,136	57,225	238,361	56.00
1987/88	191,586	67,416	259,003	64.00
1988/89	194,979	53,474	248,453	72.50
1989/90	198,128	48,233	246,361	68.30
1990/91	197,616	82,131	279,747	56.90
1991/92	207,042	94,451	301,493	62.10
Average growth rate (1986-92)	2.8	10.2	4.8	

1992/93	219,269	104,840	324,109	72.40
1993/94	234,601	116,373	350,974	85.20
1994/95	251,314	129,174	380,448	100.50
1995/96	266,617	143,383	410,000	117.30
1996/97	283,059	159,155	442,214	137.00
Average growth rate (1992-97)	6.6	11.6	8.0	171.00

Irrigation

Introduction:

Irrigation plays a key role in the development of agricultural sector which has remained the backbone of the country's economy. Although agriculture sector contributes the most to gross national production, the development in irrigation has been less than expected. The agriculture sector has still to rely largely on rainfall. Frequent drought and excessive rain have hampered the actual growth of agricultural production on one hand, while on the other, the rapid population growth has led to a situation of food import for meeting the growing demand. In this context, it has become essential to emphasize on the irrigation development for increased agricultural production from the limited land with the use of surface and groundwater resources available in the country.

While planning for irrigation development, it is also necessary to maintain co-ordination between irrigation and agricultural production programmes towards achieving maximum benefit. It has also become important to entrust full responsibility of the operation and management of irrigation systems to user farmers after soliciting their organised participation in the identification, feasibility studies, selection and implementation of irrigation systems.

Progress during the Seventh Plan:

Department of Irrigation and Agriculture Development Bank have together developed irrigation facilities in 179,337 ha of land during the Seventh Plan period.

Similarly, an additional 48,337 ha has been developed during the two years interim period of FY 1990/1991 and 1991/1992.

It is estimated that a total of 598,804 ha of land will have received irrigation facility by the end of FY 1991/1992. Full details are given in Table 1.

Table 1

S.No.	Plan Period	Achievement (ha)
1.	Up to Sixth Plan Period	371,130
2.	During the Seventh Plan	179,337
3.	FY 1990/91	20,810
4.	FY 1991/92 (Estimated)	27,527
	Total	598,804

Existing Problems:

1. Construction work of big projects planned to provide irrigation facility to large areas not being completed in time and completed projects not operating in full capacity.
2. No timely availability of Water required for irrigation and increasing financial burden on HMG due to disappointing realisation of water cess and consequent need to make large annual budgetary investments in repair and maintenance of the systems.
3. High per hectare costs of projects constructed at the government level.
4. Annually increasing government liability in small and medium projects (up to 2,000 ha) due to the delay in executing the policy of handing over such projects to the user committees.
5. Failure to commence the construction or the need to defer construction of projects included in the Seventh Plan like Babai, Sikta and others in want of funding source.

6. Inadequate participation of Nongovernmental Organisations and the private sectors in the implementation of irrigation projects.

7. Farmer's inability to derive expected benefits from the projects due to project implementing government agency's lack of direct accountability towards the people.

8. Unsustainability of the projects due to the lack of necessary attention towards the institutional aspects during the execution of the programme by the government agency.

Considering the above problems, necessary measures will be taken to complete the irrigation projects within the allocated time during the Eighth Plan period. Priority will be given to the construction of low-cost projects for their sustained operation through maximum mobilisation of available resources with the participation of government and semi-government organisations and private and non-government sector. Adequate measures will be effected in the promotion and extension of appropriate technology including irrigation management improvement.

Background of the Eighth Plan:

Development and expansion of irrigation facilities is essential for increasing agricultural production required to ensure economic growth and security in food supply. In spite of huge past investment made in this sector, farming still depends, to a large extent, on rainfall. Furthermore, even the completed projects have not been possible to be fully utilised.

Every year, there is a need to make huge investment on the repair, maintenance and operation of large projects. But these projects have not been able to provide irrigation facilities to the farmers on time. Besides, in the context of large projects under construction now being cost ineffective from financial perspective, doubt has been raised about the validity of their implementation. The very name "irrigation" has appeared to be synonymous with a vicious cycle of construction, non-operation and again reconstruction. Such a state of counterproductive investments in irrigation sector is sure to make a negative impact on the national economy.

Because of the fact that most of the small irrigation systems are operated by farmers, it seems desirable to pay special attention to such projects as can be managed and operated by themselves. The costs per hectare of some of the government constructed projects are found to range from Re. 60,000 to Re 100,000 or more. Also observed are the costs per hectare of projects constructed with the participation of farmers to be ranging from Re. 8,000 to Rs 25,000. The latter seem to be sustainable as repair, maintenance and operation works in such projects are carried out by the users themselves.

Climatological conditions vary across different parts of the country due to the country's physiographic. It has, therefore, become very essential to maintain co-ordination between the choice of crops and the provision of irrigation facility. In the same vein, it is necessary to develop and extend small irrigation systems that conform to the country's physiographic and cause minimum adverse impact on the environment.

objective:

Irrigation projects in the Eighth Plan will be implemented to achieve the following objectives:

1. To increase agricultural production using appropriate irrigation technologies suited to varying geo-physical and climatic conditions of the country and that cause minimum negative impact on the environment.
2. To increase agricultural production and productivity by improving the management of existing irrigation systems to bring about increased reliability in irrigation management.
3. To provide maximum irrigation facility by implementing financially, technically and environmentally sustainable and cost effective projects with farmers participation.

To achieve the aforementioned objectives, development and extension of irrigation facilities will be undertaken on the basis of following priorities:

1. Projects costing less per hectare and projects requiring minimum government involvement in repair and maintenance.
2. Projects guaranteeing high people's participation; projects that can be implemented, operated and maintained by users themselves; and projects requiring minimum government investment.

3. Projects more likely to benefit small farmers and backward communities.
4. Projects yielding quick returns.
5. Projects constructed in the past which now remain non-operational and can be rehabilitated at low cost with the organised participation of farmers.
6. Multipurpose projects of national importance.
7. Irrigation projects in under-construction stage.

Policies:

Following Policies will be pursued for achieving the irrigation targets set:

1. Projects with less cost per hectare will be selected after the survey of potential projects requested by the farmer. While planning any irrigation project, users will be involved in every step right from project initiation. Same procedure will be followed for repair and maintenance as well.
2. Public communication means will be used while implementing the programme with a view to provide equal opportunity to all for participation.
3. Additional investment in projects under construction stage for many years and those with high cost per hectare will be made only after their thorough re evaluation.
4. Farmers' field channels will continue to be improved with the users' participation by arranging necessary technical assistance. Besides, tube wells and Wells constructed in the past will be renovated as needed.
5. Necessary arrangements will be made to avail electricity and drinking water from the small irrigation systems, if found feasible to do so.
6. Private sector will be encouraged to actively involve in the development and expansion of irrigation facility.
7. Joint management system will be applied for involving the users in the management of multipurpose, large an medium projects with special emphasis given on irrigation management training institutional development at the farmers' level and access to technical services.
8. Encouragement will be given for the operation of government constructed project s commanding over 2,000 ha in the Terai and 500 ha in the Hills under the joint management of the responsible government agency and the users' committee.
9. Government constructed projects commanding less than 2,000 ha in the Terai and 500 he in the Hills will continue to be handed over to the ser committees.
10. Semi-government organisations, users' committees, private sector and nongovernmental organisations will be encouraged to be involved in the construction of small irrigation projects.
11. Conjunctive use of groundwater will be encouraged to be used in areas not irrigable round the year by surface system only.
12. Construction expenses of small and medium projects will be jointly borne by His Majesty's Government and the users.
13. Lift irrigation powered by electricity, bio-gas and wind wi11 be encouraged where feasible power in order to reduce dependence on imported fuel.
14. The users associations and committees will be mandatorily involved in the co, lection of water fees in order to instill self-reliance in projects to be operated at the government level and under joint management.
15. Water cess will be levied only when services are actually provided to the farmers.

16. Priority will be given to the installation of shallow tubewells in areas where shallow aquifers exist. The installation of the tubewells will be gradually transferred from the government to the private sector. Groundwater exploration, feasibility study and monitoring will be carried out on a priority basis. Arrangements will be made to avail information relating to groundwater to concerned District Development Committees, District Irrigation offices and other agencies.

17. Feasibility study reports prepared to date will be made available to the District Irrigation Office and the indices of such reports will be made available to the concerned District Development Committee and users' committees.

18. Sprinkler irrigation will be encouraged in the hilly region in an extensive manner on the basis of feasibility - Where feasible, lift irrigation schemes will be operated by electricity available from the small hydroelectric project.

19. While executing the small irrigation projects, the concerned agency will have to explain clearly about cash voluntary labour and repair and maintenance expenses to be borne by the users' committee, and should execute the project after getting written agreement from them on these provisions, Construction expenses of the project will be operated by joint signature of the person nominated by the users' committee and the technical representative of the executing agency. It will be mandatory to get the decision of the user's committee if any part of the project needs to be awarded to a contractor. Arrangements will be made to keep the records of expenditure in clear and transparent manner at all levels.

20. Irrigation programme will be implemented in accordance with Irrigation Policy 1992", High priority has been given to peoples' participation in the Eighth Plan. Arrangements will be made to clearly determine people's participation while implementing any project. When implementing any project, a fixed sum of money will be borne by His Majesty's Government and the rest by the users' committee.

21. Specified management expenses will be made available to be implemented in order to solicit increased participation of the semi-governmental organisation, the non-governmental association/ organisation and the private agency. The role of the non-governmental organisation, the private sector and the users has remained minimum at present in the process of developing the irrigation sector. Research on promotion and extension of the irrigation technology will be initiated during the plan period to implement the irrigation project through the nongovernmental organization, private entrepreneurs and the users also in areas where service cannot be rendered, according to the demand of the farmers due to the institutional problems of the government and semi government agencies.

22. For this purpose, the non-governmental organisation, the private enterprise firm and the users committee registered at national or district level will be encouraged to get involved in the development of the irrigation sector.

23. Research, promotion and extension of the irrigation technology will be carried out through the government and semi-government organisations.

Target and Programme:

The total, physical target of the under construction project included in the plan period is 135,250 ha of which 120,690 ha, will receive irrigation facility by FY 1996/97. The proposed projects with a total physical target of 81,400 ha to be initiated during the plan period will be implemented with a view to provide irrigation facility to 39,292 ha of land within the plan period. Similarly, an additional 1,150 ha will be irrigated through feasible and continuing projects. The irrigation programme to be implemented by the Agriculture Development Bank will command 119,700 ha. Besides this, a total of 13,063 ha will receive irrigation facility by the projects to be implemented through the non-governmental organisation and the private sector. In this way, the total area to be irrigated from the new and continuing projects during the plan period will be about 293,895 ha.

Irrigation facility will be made available to 132,763 ha of land from the irrigation projects of short gestation.

Irrigation facility will be available to 52,650 ha of land from the medium and small irrigation projects (ILC and ISP).

Irrigation facility will be available to 108,482 ha and 185,413 ha of land respectively from the large and the small irrigation project.

Additional irrigation facility will be available to 293,895 ha. of land during the plan period from different sources – the surface, the underground and the unidentifiable sources contributing 204,955; 87,790 and 1,150 hectares respectively. The total irrigated area will thus reach 892,699 ha by the end of the plan period.

In order to achieve the aforementioned target, the following programmes will be implemented:

Sunsari Morang Irrigation Project (Second Phase):

Though initially targeted to provide irrigation facility to 66,000 ha of land in Sunsari and Morang districts, this project is providing partial irrigation facility to only 20,000 ha due to lack of command area development various other technical problems.

Sediment control and additional improvement works in the Chatra main canal will be undertaken during the plan period as the people has lost effectiveness due to sediment entry in large quantities into the canal system from the river intake. Irrigation facility will be provided to 9,750 ha command area from the facilities constructed during the first phase of the programs. With the completion of second phase of the programs, irrigation facility will be provided to a total of 16,700 ha of land.

Bagmati Irrigation Project (First Phase):

Work was started to provide seasonal irrigation to 68,000 ha of land in the districts of Bara, Rautahat and Sarlahi during the first phase of the Bagmati irrigation project. Though targeted to provide irrigation facility to 30,000 ha (16,000 ha in Rautahat and 14,000 ha in Sarlahi) of land during the first stage, the target remains unfulfilled due to the incomplete gate construction work. As construction work of the branch canal in the western main canal system and the installation of gates have not been completed, these works will be completed in the second year of the plan. There is also a target to create the infrastructure to provide irrigation facility to an additional 6,000 ha of land from the western main canal system. Thus, the gross target to provide irrigation facility from the western and eastern main canal systems is 36,000 ha by the third year of the plan with 22,000 ha and 14,000 ha respectively from the western and eastern main canal systems.

Narayani Irrigation Project (Third Phase):

Irrigation facility will be made available in a more reliable way after undertaking construction and management service works to be decided following the review of this project.

Marchawar Lift Irrigation Project (Second Phase):

From this project, 5,600 ha of land falling in Rupandehi district is targeted to be irrigated by pumping water from the Tinao river. Irrigation facility was provided to 2,000 ha of land with the completion of the pump house, the main canal transmission line and 22 km feeder road under the first phase work. The project was divided into two phases due to the delay in construction for various reasons. Under the second phase, irrigation facility will be provided to 3,600 ha of land by developing the command area and extending the canal system.

Bhairahawa Lumbini Groundwater Project (Third Phase):

Additional 8,200 ha of Rupandehi and Nawalparasi land is targeted to be irrigated from the groundwater under this project. During the Plan period, however, irrigation facility will be provided to an additional 4,000 ha of land from this project.

Babai Irrigation Project (First Phase):

Construction of weir cum bridge in the Babai River has been started with His Majesty's Government's own resources under the first phase of this project. The project aims at providing irrigation facility to about 13,200 ha of land belonging to 10 different Village Development Committees falling in the eastern bank of the Babai River in Bardia district. Weir cum bridge, main canal, branch canals and other structures will be completed within the plan period to irrigate all 13,200 ha of land as targeted.

Mahakali Irrigation Project (Second Phase):

The second phase works have already been initiated as 4,600 ha of land is already being irrigated from 13 cumecs of water made available under the Nepal-India Agreement. An additional 6,800 ha of land can be irrigated from the available water. The works under the second phase is targeted to be completed the third year of the plan. Sufficient agricultural intensification is expected with the access to systematic irrigation facility to 11,400 ha of land in the district of Kanchanpur after the full development of this project.

Sector Programme (Eastern and Central):

This programme has been initiated with a view to develop irrigation as sectoral programme by bringing about changes in the donor traditions of making the assistance available only after a detailed prior study of the specific sub-projects.

According to this programme, irrigation facility will be developed in 17,000 ha and 8,000 ha of land respectively from renovation of farmers' canal and new projects in the thirty five districts of the Eastern and Central Development Regions. Project implementation capability will be enhanced by strengthening the District Irrigation Offices in all 22 districts. Altogether 11,200 ha and 9,800 ha of land in the eastern and central development regions respectively will receive irrigation facility during the plan period.

Irrigation Line of Credit and Major Extensive Irrigation Sector Project (Western, Midwestern and Farwestern Development Regions):

The project was launched in the form of a pilot project with a view to provide surface and groundwater irrigation without prior specification of the sub-projects in seven districts of the Western Development Region – Gorkha, Lamjung, Tanahu, Kaski, Syangja Nawalparasi Kapilbastu (underground and surface) and two district of the Mid-western Development Region. - Banke and Dang Groundwater irrigation). The project is in the verge of expansion as a pilot programme in other districts of the Western, Midwest-n and Far Western Development Regions.

Project works under ILC, implemented in the form of a pilot programme, are targeted to be completed by FY 1993/94. Upon completion of this pilot phase, this programme will be continued the form of a extensive sector irrigation programme. Und the extensive sector irrigation programme included in the current plan, feasible surface and groundwater irrigation projects in the ILC district and groundwater projects in the eastern and central terai districts will be implemented. Under this program, it is targeted to provide additional irrigation facility to 22,900 ha (9,00 ha 6,800 ha and 6,800 ha of respectively in Western, Midwestern and Far-western Development Regions) from surface sources and 8,750 ha (3,000 ha, 2,000 ha, 1,500 ha, 1,250 ha and

1,000 ha respectively in the Western, Midwestern, Far-western, Central and Eastern, Development Regions) from groundwater sources during the Plan period.

Rasuwa Nuwakot Integrated Rural Development Project (Irrigation Programme):

This, programme was launched in order to Provide irrigation facility to 2,400 ha of land by implementing small and medium irrigation schemes in Rasuwa and Nuwakot districts. Additional irrigation facility will be made available to 2,000 ha of land during the Plan period.

Dhaulagiri Zone irrigation Project:

Under this project, irrigation facility will be made available to about 1,640 ha of land in the districts of Parbat, Myagdi, Mustang and Baglung of Dhaulagiri zone.

Second Hill Irrigation Project:

An additional 800 ha of land will be irrigated in the districts of Doti, Bajha ng, Bajura and Achham of the Seti zone under this project.

About Continuing Projects:

Under this head, reliable irrigation facility will be made available from Sinkalama, Karnali Bheri Integrated rural development, and Arjun Khola project s. Similarly, management services will be made available by reviewing the irrigation programe under the Seti and Karnali Bheri Integrated Development Projects and the Khutiya irrigation Project (Second Phase).

New Feasible Projects:

Praganna Kulo:

If the canal systems are renovated and structures constructed at right places with the construction of a permanent intake for providing systematic irrigation from the Rapti river, it is estimated that irrigation facility can be made available to about 7000 land. It is thus targeted to provide systematic irrigation facility to 7,000 ha of land during the Plan period by undertaking detailed study during the first two years of the plan.

Other Multipurpose Irrigation Projects:

Studies are proposed to be conducted in order to prepare necessary infrastructures for providing irrigation facility to 175,000 ha. of land in the districts of Saptari, Udayapur, Sarlahi and Mahottari of the eastern and central development region from the Sunkosi-Kamala Project and 67,000 ha of land in the district of Jhapa from the Kankai Project. These studies will be put forth for gradual implementation.

Feasibility Study:

Viable projects on the basis of feasibility study will be put to implementation.

Proposed New Projects:

Mahottari Deep Tubewell Irrigation Projects:

Under this project, deep tubewells will be installed to provide groundwater irrigation to 8,000 ha of land in the northern belt of the Mahottari district having no other means of irrigation. This project will be initiated in this plan period and completed during the Ninth Plan period. During the current plan period, the project will provide irrigation facility to 500 ha of land.

Sunsari Morang Jhapa Tubewell Irrigation Project:

Under this project, it is planned to provide groundwater irrigation to 11,000 ha of land not possible to be irrigated by surface sources in the districts of Sunsari Morang and Jhapa. Implementation of this project will begin in the current plan period with plan target to irrigate 500 ha of land.

Birgunj Groundwater Project:

Implementation of this project is expected to begin in this plan period upon completion of the detailed feasibility study. It will provide irrigation to about 8,000 ha of land in the northern part of Bara and Parsa districts, not covered by the Narayani Irrigation Project. Irrigation facility will be provided by this project to additional 500 ha during the plan period.

Community Tubewell Project:

It is planned to provide the tubewell for irrigation in the Terai regions of Far-western and Midwestern Development Regions to be operated, repaired and maintained by farmers themselves on the basis of farmers' demand. This project is to be reappraised by the International Fund for Agriculture Development in FY 1992/93. Following this, it is targeted to provide groundwater irrigation facility to 1,000 ha of land by initiating the project during this plan period.

Eastern Terai (Morang) Irrigation Project:

The feasibility study of this project was completed with a view to provide irrigation facility to 7,000. ha of land with the conjunctive use of groundwater and surface water from Bakraha, Maria, Bara, Keraka and Dans rivers. Implementation of the project will be initiated during this plan period to provide irrigation facility to 750 ha of land by up-dating the feasibility study.

Rajapur Irrigation Project:

Irrigation facility in one or the other form is currently available to about 1 5 00 0 he of land from 22 canals originating from Geruwa and Karnali rivers in a place called Rajapur Tappu in Bardia district. This project is aimed to be developed in the form of river control and farmers' canals renovation project, as the onslaught of the

excessive flood in the Karnali every year cause s great harm to all t e 22 canals and the entire command area of Rajapur Tappu. Its construct ion work is targeted to be initiated from the first year of the plan period. It aims at providing systematic irrigation to 10,000 he of land with in the plan period.

Rani, Jamara and Kulaharia Canals:

The farmers have, in their own traditional ways, irrigated some areas in the district of Kailali from Rani, Jamara and Kulharia canals by channeling water from the Karnali river. Proper utilisation of available water has, however, not been possible due to the lack of necessary structures including intake. It is aimed at providing irrigation facility to 7,000 ha of land by systematising the operation of the above canal system during this plan period.

Eastern Rapti Irrigation Project:

The programme to provide irrigation facility to eastern Chit-n by damming the eastern Rapti river will be considered. Under the revised programme irrigation facility will be provided to 4,242 ha of land during the plan period against the proposed plan of providing irrigation to 1,800 ha by 900 tubewells and to 71000 ha by improving 84 farmers' canals.

Trishuli Irrigation Project:

Irrigation service has been provided to only 20-30 ha of land from the Battar lift irrigation project as against the target of 424 ha due to the scarcity of spare parts. The construction work will be completed during the plan period upon the completion of the feasibility study to provide irrigation facility to 1,200 ha of land belonging to Bidur and Battar from the power channel of the Trishuli hydro-electric project, without affecting the latter. This will transform the lift irrigation project into a surface irrigation project.

Bheri-Babai Diversion Project:

Feasibility of this project will be studied during the plan period. Irrigation facility can be made available to additional 60,000 ha of land in the districts of Banke and Bardia from Bheri/Babai and Sharada/Babai multipurposed projects. Therefore, the feasibility study will be carried out during the plan period and appropriate steps will be taken to advance the project to the implementation level based on the study.

Upper Mahakali:

It is estimated that irrigation facility will be available to about 3,000 ha of land from the Upper Mahakali irrigation project during the Eighth Plan period. This will provide irrigation facility to the land north of the existing Mahakali irrigation project from the water to be received by Nepal for irrigation from the Tanakpur barrage across the Mahakali River.

Lumbini Integrated Irrigation Project (Rajkudwa irrigation Project):

Rajkudwa irrigation project planned with the objective of drawing canals from the dams built across Kondre and Rajkudwa rivers in the district of Kapilvastu in the Western Development Region and collecting water even for the winter crop by refurbishing an increasing the capacity of other ponds existing in that region including those of Gorusingye and Rajpur is expected to provide reliable irrigation to 5,000 ha of land lying between Dhekarma and Belwa Gurubda rivers. It is estimated to provide reliable irrigation facility to about 2,400 ha of land during the plan period.

Kochi Hill (Second Phase):

This project is estimated to provide irrigation to 1,600 ha of land upon the initiation of second phase programme in Ilam, Taplejung and Panchthar districts.

Bahundanda/Phalkapur Irrigation Projects:

These projects belong to the district of Dang of the Rapti zone. Irrigation facility will be available to 800 ha. of land of that district from this programme. Feasibility study of this project between completed. It is planned to provide irrigation facility as per target upon completion of its construction work during the plan period.

Small irrigation Projects to be Operated by Agricultural Development Bank:

In view of the fact that it has been implementing small irrigation projects in an effective manner, the Agriculture Development Bank is expected to provide irrigation facility to a total of 119,700 ha of land by means of tubewell, surface irrigation, the sprinkler system etc. during this plan period.

Irrigation Programs to be implemented by Non-governmental Organization and the Private Sector:

The Non-governmental organisation and private sector will be involved in the task of providing the access to irrigation facility to the economically deprived backward communities living in remote areas as these people cannot even contact government agencies or Agriculture Development Bank for the said purpose. The irrigation facility will help increase their income through increased agricultural production.

Irrigation facility will be provided with the application of technology involving sprinkler, drip, linnares pump etc. in view of the land feature and geological condition. Efficiency of 1250 number of shallow tubewells from among those installed in the Terai will be increased with electrification. Irrigation will also be provided in the hilly areas by means of water harvesting. Lower HP pumps will be made available to provide irrigation facilities in areas having access to electricity. In this way, irrigation facility will be made available to about 13,063 ha of land by utilizing different mechanisms.

Other Programmes:

Operation, Repair and Maintenance

Operation, repair and maintenance of different irrigation projects of the kingdom not turned over to the farmer's groups will be continued. It is necessary to undertake repair, maintenance and improvement of completed projects every year in order not to reduce the usefulness of such projects.

Irrigation Management, Project Turn over, Training and Research:

The Department of Irrigation has been conducting training programmes on irrigation with foreign assistance for some years in the past. The objective of such training programme in an institutionalised manner is to create and enhance capacity in different aspects of irrigation development and management within the country. This training centre will be gradually developed into an institution to impart national level training on the subjects of irrigation development and management within the country. This training centre will be gradually developed into an institution to impart national level training on the subjects of irrigation development management. Extensive improvement will be effected in the irrigation management system by enhancing the capability of government agencies as well as water users' association through the programmes of this institution. The responsibility of organising all trainings under the irrigation sector will be entrusted to this institution. There is also a program to continue other applied research and studies in order to improve the implementation of training and irrigation systems.

The programme of gradually turning over full responsibility of completed small and medium irrigation projects (2,000 ha in Terai and 500 ha in hill) at the government level to the farmers users' committee after undertaking necessary improvement works will be pursued. Besides, it is planned to make irrigation participation and management aspects more organised and effective by involving local users' group in the operation, repair and maintenance of large and medium projects.

Groundwater Investigation Project:

There is a need to construct and develop groundwater irrigation projects, after undertaking investigation and feasibility study on priority basis, in areas where surface irrigation is not feasible. Therefore, investigation drilling and testing and groundwater investigation works will be continued during the plan period.

In addition, a strategy will be formulated and a master plan prepared for the development of groundwater with the study of different alternatives for groundwater irrigation development.

River Control Project:

River control works will be continued as a regular programme in order to check the damage to land and settlements and the erosion of cultivable land resulting from the eroding river banks following floods in the river. River control works will be carried out at inevitable places by encouraging local people's participation. A Master

Plan of one or two major rivers will be prepared in every region under river control programme and the control work will be carried out in a systematic manner. Under this, river control works of Rangeli and Sunsari will also be implemented.

Water Induced Hazard Control:

Support will be provided to water induced hazard control works by organising relevant training programmes and collecting the data relating to water induced hazard control. Besides, construction of the hydraulic laboratory, installation of equipment and various training programmes will be undertaken.

Implementation Procedure:

ILC/18P

Requisition for a new project may be placed with the district irrigation office by the users' committee. Information will be made available to the farmers by the District Irrigation Office regarding the policy related to the project implementation, type and extent of people's participation, repair and maintenance, supervision of the construction works etc. The District Irrigation Office will forward the survey, design and estimate to the Regional Appraisal Committee (RAC) for approval. The selection of such projects will be done by RAC on a priority basis. The users' committee to be constituted by the farmers will be registered as per prevailing law on approval of the project by RAC. An agreement between DID and the users' committee will be signed incorporating the basis for cost sharing, guarantee of people's participation, repair and maintenance and supervision of construction work etc. A part of the amount in cash to be borne by the users' committee will be deposited in the nearest bank either from its own resources or With the assistance of the bank. The bank account will be operated with the joint signatures of the representative of the DIO and the representative of the users' committee.

Small, medium and large irrigation projects will be implemented under ILC/ISP

Agriculture Development Bank:

Requisition from a group or individual for any small irrigation project may be made with the nearest office of the Agriculture Development Bank. There is an arrangement to provide information to the farmers about the detailed survey, design and estimate by the bank upon the receipt of the project request. When it is decided to implement the project, a users' committee will be constituted from among the farmers. An agreement will be reached between the bank and the users committee regarding the cost estimate of the project, cost sharing formula, people's voluntary labour, repair and maintenance etc. The amount to be made available by His Majesty's Government and the amount to be borne by the users' committee in the total estimate will be deposited in the bank. The amount required for the construction of the project is to be spent with the joint signatures of the representative of users' committee and the representative of the bank. Under this programme, projects of up to 500 ha are being implemented. The project is handed over to the users' committee upon its completion.

In the case of a personal project, the farmers may request the bank to finance the irrigation modes of their choice. Agricultural Development Bank will make arrangements to provide the grant amount obtained from His Majesty's Government including loan, if the farmer's project is found feasible. There is a provision for certification by the bank technician as to whether the project is completed or not.

Project Implementation and Monitoring Arrangements:

1. A high level committee will be constituted under the chairmanship of the Honourable Minister for Water Resources in order to co-ordinate agencies engaged in planning, monitoring and implementing national programmes for the development and expansion of irrigation.
2. The arrangement of programmes to be implemented by the non-governmental organisation and the private sectors along with the management of financial resources will be undertaken by the aforementioned committee.
3. Emphasis will be given on systematic monitoring arrangements in order to bring about effectiveness in the implementation of different projects during the plan period. All implementing agencies will have to send mandatory progress reports in every phase to the concerned ministries.

Details of Expenditure:

Estimated cost to undertake the above programme is Rs.8,932.6 million for irrigating 161,132 hectares of land from different irrigation projects to be implemented by His Majesty's Government and other complementary programmes. Out of this investment, Rs.1,279 million on other complementary programmes.

His Majesty's Government will make available Rs. 746.3 million to small irrigation programmes to be implemented through the Agriculture Development Bank in order to provide irrigation facility to 119,700 hectares of land.

It is estimated that Rs. 620.9 million will be borne by HMG towards providing irrigation facility to 13,063 hectares of land from the programmes to be implemented by non-governmental organizations and the private sector. This also includes the programme for electrification of 1,250 tubewells.

In order to achieve the aforementioned target, management cost worth Rs. 893.3 million, 150 million and 155.2 million for the projects to be implemented by the government, Agriculture Development Bank, and Non-government Organisation/Private Sector respectively and contingency expenses worth Rs. 467.7 million amounting to a total of Rs. 1,666.2 million is estimated to be incurred.

A total of Rs. 11,966 million is estimated to be spent to meet the expenses of projects under construction, new projects to be implemented and other complementary programmes during the Eighth Plan. For this purpose a sum of Rs. 4,801 million will be borne by HMG and 7,165 million from external assistance. People's participation worth Rs. 1,028.6 million will also be mobilized in the programme.

Table 2
Total Investment in Irrigation

SN	Details	Area Irrigated (ha)	Total Expenditure (Rs. In million)	People's Participation) Rs. In million)
1.	Irrigation and other programmes to be implemented by HMG	161,132	8932.6	423.6
2.	Programme to be implemented by Agricultural Development Bank	119,700	746.3	542.9
3.	Programme to be implemented by Non governmental Organisation and Private Sector	13,063	620.9	62.1
4.	Management Expenses for the Agricultural Development Bank	-	150.0	-
5.	Management Expenses @ 25% for the Non government Organisations and the Private Sector	155.2	-	-
6.	Contingency	-	467.7	-
7.	Administrative and Management expenses @ 10% for the programmes to be implemented by HMG	-	893.3	-
	Total	293,895	11966.0	1028.6

Details of Manpower:

The people's participation will play a key role in the Eighth Plan period and the irrigation sector will be gradually oriented towards autonomous entrepreneurship. In keeping with the policy of the projects constructed by the government to be gradually operated under joint management or turned over-to the users' group arrangements will be made for the requisite manpower by effecting timely changes in the government agencies in order to operate locally self reliant irrigation programmes.

Appendix 1

Details of Total Investment in Irrigation Projects

S.No	Project Description	Total	
		Estimated Expenditure (Rs.million)	Irrigated Area (ha)
1.	Current:		
1.1	Sunsari Morang Irrigation Project	760.0	-
1.2	Irrigation Sector Project	924.0	21,000
1.3	Bagmati First Phase	134.2	36,000
1.4	Narayani Irrigation Project	190.0	-
1.5	Rasuwa Nuwakot second	76.5	2,000
1.6	Marchawar Irrigation Second	205.3	3,600
1.7	Bhairahawa Lumbini Third	691.2	4,000
1.8	Dhaulagiri Zone Irrigation Project	66.4	1,640
1.9	ILC and Comprehensive Irrigation Sector Programme		
	a Surface Water	1030.5	22,900
	b Groundwater	315.0	8,750
1.10	Babai Irrigation Project	994.8	13,200
1.11	Mahakali Second	651.4	6,800
1.12	Second Hill Irrigation	52.8	800
1.13	Seti IRDP	3.1	
1.14	Khutiya Irrigation Project	0.2	
2.	New:		
2.1	Praganna Cana	157.1	7,000
2.2	Mechi Hill Second	24.5	1,600
2.3	East Rapti	406.0	4,242
2.4	Rajapur Irrigation Project	285.6	10,000
2.5	Bahundanda/Phalkaur Irrigation Project	9.7	1,000
2.6	Rani, Jara and Kulharia Canal	68.8	7,000
2.7	Upper Mahakali	142.5	3,000
2.13	Community Tubewell Project	38.0	1,000
2.9	Mahottari Deep Tubewell	27.0	500
2.10	Sunsari, Morang, Jhapa Tubewell Irrigation Project	36.0	500
2.11	Birgunj Groundwater Project	36.0	500
2.12	East, Terai (Morang) Irrigation Project	45.0	750
2.13	Rajkudwa Irrigation Project	78.3	2,400
2.14	Implementation of Feasible Projects and some continuing Projects like SINKALAKA, Karnali Bheri Integrated Development Project, Arjun Kola etc.	203.7	1,150
2.15	Feasibility study and implementation of Trishuli Battar, Bheri Babai Diversion, Sunkokoshi, Kamala and other projects, River Training, Institutional Development, Irrigation Management and Training, Repair & maintenance, Establishment of Water induced hazard centre and other different projects and programmes	1279.0	
2.16	Agriculture Development Bank	746.3	119,700
2.17	Non-governmental Organisation	620.9	13,063
3.	Other Expenses:		
3.1	Contingency	467.7	-
3.2	Administrative and Management Expenses	1198.5	-
	Total	11966.0	293,895

Appendix 2

Physical Target by Type of Water Resource

S. No.	Executing Agency	Development Region/Hectares										Total Target (Hectares)	
		Eastern		Central		Western		Mid-Western		Far-Western		Surface	Under-ground
		Surface	Under-ground	Surface	Under-ground	Surface	Under-ground	Surface	Under-ground	Surface	Under-ground	Surface	Under-ground
1	HMG												
	Current	11200	1000	47800	1250	14540	7000	20000	2000	14400	1500	107940	12750
	New	1600	1250	3152	2090	2400	-	17800	500	10000	500	34952	4340
2	Agricultural Development Bank	10852	17030	11564	18735	13639	10710	9327	10925	3618	13300	49000	70700
3	Non-government and Private Sector	2923	-	2398	-	2710	-	2938	-	2094	-	13063	-
		26575	19280	64914	22075	33289	17710	50065	13425	30112	15300	204955	87790

The target does not include 1150 ha under feasible and continuing projects which could not be categorized by type.

Energy

Introduction:

The prosperity of any country can be gauged by the per capita energy consumption of that country as a direct positive relation is noticed between the two. Although per capita consumption of energy in Nepal is extremely low compared to other countries, the annual import bill of petroleum products, comprising only four percent of the energy consumption, claims as high as 40 percent of annual earnings from export. Solar energy is without doubt the main source of energy of the lithosphere, but the process of converting the solar energy into electricity and other kinds of energy in order to meet the need of modern industry, transport, household and others in general, has been found to be very costly. Therefore, the desperate current need is to meet the constantly increasing energy requirement through the proper development and mobilization of main energy resources like forest, bio-mass and hydropower existing in the country. It is necessary to be able to gradually substitute the import of fossil fuel by hydro-electricity to be generated internally. The energy sector program in the Eighth Plan has fully considered these realities.

Progress during the Seventh Plan Period and the Period without Plan:

The progress in the electricity sector and alternative sources of energy during the Seventh Plan (1985-1990) and the interim period (1991-1992) was as follows:

		Seventh Plan 1985-1990	Interim Period 1991-1992
	Electricity		
1.	Generation (Kw.)		
	a. Hydropower	103,055	6,690
	- Medium and large projects	101,000	5,100
	- Small projects	2,055	1,590
	b. Fuel operated	-	26,000
2	Transmission Line (Km.)	1,226	197
	- 132 KV	723	-
	- 33 KV (Sub-grid)	503	197
3	Alternative Sources of Energy		
	3.1 Small hydropower (Kw.)	1,145	239
	3.2 Bio-gas plants (nos.)	3,856	3,090
	3.3 Solar energy		
	3.3.1 Power generated (Kw.)	80	30
	3.3.2 Solar water heater (Nos.)	1,500	1,000
	3.3.3 Solar Pump	5	1
	3.4 Wind energy (Kw.)	20	-
	3.5 Development of bio-mass technology		
	3.5.1 Densification (Nos.)	7	1
	3.5.2 Improved Cookstoves (Nos.)	49,940	7,544

In addition to the progress shown above, preliminary studies relating to feasibility and detailed engineering designs of Upper Karnali (240 MW), Upper Arun (350 MW), Bhoté Kosi (48 MW) and Khimti Khola (60 MW) projects which can be implemented for future internal consumption and exports have been completed. Feasibility studies of Arun-III, Upper Arun and West Seti hydro-electric projects, have also been completed and represent economically attractive propositions. Also completed is the study of a prospective project of 10 MW capacity in the Jhimruk river for supplying electricity to the headquarters of some hill districts (Arghakhanchi, Gulmi, Pyuthan, Rolpa etc.) of the Western and Midwestern Development Regions. The detailed engineering study of the Arun-III hydro-electric project (402 MW) was already completed in order to initiate construction for meeting the projected demand to be met from the central grid. A revision in the detailed engineering study is underway to reduce the size of Arun-III project to 201 MW as warranted by the difficulty in obtaining necessary fund for the project of that capacity at present. Besides, detailed engineering study of the 100 MW Kaligandaki

project is in progress following the arrangement of necessary fund from UNDP upon the updating of its feasibility study.

Regarding major hydroelectric projects with export potential, studies relating to detailed project preparation of the Karnali (Chisapani) high dam multipurpose project and necessary field survey works in order to carry out the feasibility study of the Mahakali (Pancheswar) multipurpose project in the international border have been completed. Talks between officials of India and Nepal at various levels are in progress in order to implement these projects.

Works relating to increasing the capacity particularly of the existing Trishuli-Devighat hydropower stations from among the existing generating stations will be undertaken.

Existing Problems:

Commercial and traditional fuels have remained as two principal sources of national energy supply. Hydropower in particular will be developed as a new commercial energy base for the country's economic growth. It is essential to pay special attention to the scientific management of the traditional energy sources in order to ensure its sustained use and also to maintain the environmental balance.

Traditional Energy:

1. Excessive Reliance on Timber and Fuelwood:

It is evident that a sustainable supply of fuelwood can not be maintained from uncontrolled clearance of forests. If this process of forest destruction is to continue, there will be a scarcity of fuelwood in the country in the very near future and additional environmental problems of different sorts will also emerge. Such a situation has arisen due to the failure to take effective steps towards scientific forest management.

Another principal reason for forest denudation is associated with the ownership of the forest. The legal ownership and control of forest resources of the kingdom is vested exclusively with His Majesty's Government. In the context of the absence of any alternative to immediate and proper substitution for fuelwood, the transfer of forest ownership to the private and community sectors has remained the sole alternative for safeguarding the forest resources and meeting the fuelwood need.

2. Substitution of Fuelwood by other Traditional Fuels:

The use of other fuels has been steadily increasing due to the short supply of fuelwood. In the rural areas, an increased substitution of fuelwood by agricultural residues and cattle wastes has taken place. This has adversely affected fertility of the cultivated land due to deficiency in organic manure. In the urban areas, the rich community has started using the imported commercial fuels in place of fuelwood. The proportion of population using electricity as fuel is, however, still very small. Similarly, industries have started using agricultural residues and kerosene due to high price of fuelwood.

Commercial Fuel:

1. Electricity:

It is evident from the table in Appendix 2 that the gap between electricity demand and supply will continue to be widened in the coming years. Electricity supply compared to demand will be less from the coming Fiscal Year (1993/94). A monthly deficit has occurred even prior to this period. In the coming couple of years, additional electricity demand by new industries is estimated to be 50 MW. The deficit is expected to continue until the Kaligandaki (1998/99) project commences power generation in FY 1998/99 followed by Arun-III in FY 2001/02 as targeted. The principal problem in the energy sector is thus the imbalance between electricity demand and supply. There are, however, other operating constraints as listed below;

1. At present electrical energy is being made available at rates lesser than its actual cost. This has made it difficult to attract the investment of the private sector in electricity generation.
2. The percentage of leakage is very high in the electric network due to technical and hosts of other reasons. This has caused a negative impact on the operational and financial aspects. Besides, the burden of high electric tariff has fallen on the shoulders of consumers as well.
3. Problems arise at the time of maximum electricity demand due to failure of generation as per installed capacity from many of the currently operated power stations due to the lack of systematic repair and maintenance works.
4. The load factor of existing electricity distribution system is 48% only. This seems to be less than the expected level. The possibility of increasing the existing load factor through proper demand management is indicated.

5. It has not been possible to receive proper return out of the investment because of the imbalance between the investment on power generation and the creation of transmission network.
6. Analyzed from the point of number of employees in the power sector, power generation and annual sale per employee in Nepal seems to be the least of all countries in Asia.
7. It has not been possible to plan hydro-electric projects in a proper manner due to the lack of co-ordination among the agencies involved in the power sector.
8. There does not seem to have been an appropriate selection of hydro-electric projects in a systematic way due to ineffective reviewing technique applied to studies relating to hydro-electric projects and an inefficient selection process. This has resulted in the lack of sufficient alternatives for implementation of the project.
9. It has not been possible to maintain continuity in the development of hydropower sector because of the inability to appoint concerned agencies themselves as the executing agency and make the Nepali technical agencies responsible and accountable for the project while conducting the study and implementing the hydro-electric projects.

Imported Fuel:

It has already been mentioned that the requirement of commercial fuel such as mineral oils and coal is being met through import. The import of mineral oils and coal comprised 85% of the commercial fuel consumption in FY 1990/91. While, in fact, the imported mineral oils and coal constituted 91% of the commercial fuel in 1985/86, this has now declined to 85%. Forty percent of the income earned through export is thus spent on the import of petroleum fuel.

Inadequacy of Appropriate Programmes Relating to Alternative Energy:

It has not been possible to promote alternative energy sources like biogas, micro hydro, improved stove, solar water heater etc. at the desired level. Government policies in this regard were not reliable in the past. Though these technologies were publicized at the peoples' level, they could not be brought into adequate practical use.

Constraints relating to Investment:

As regards investment, the power sector has been receiving the highest priority followed by the forestry sector. But the level of investment in the development of natural gas and alternative energy seems to be insignificant. Also, the investment in forest, in reality, is not even sufficient for the supply of fuelwood. An analysis of the expenditure statistics of the past decade reveals that the expenditure incurred in the power sector ranged from 63.2 percent to 87.5 percent of the expenditure incurred in the development of the entire energy sector. The investment level in the power sector is expected to stay at the same level in the coming years as well.

It could have been possible to maintain the growth rate of the power sector at a higher level by mobilising economies of scale inherent in the larger projects. This, however, entails a very high investment beyond the capacity of the present economy. Implementation of large projects to date has been done with the mobilisation of the international consortium financing. Under this arrangement, there is a possibility of diseconomies of scale due to increased cost of the project because of the tied financing. It is very difficult to obtain the entire investment requirement from a single donor institution in the development of large hydro-electric project as it requires heavy foreign investment. It has not been possible to generate electricity at stipulated time and cost due to delay in the implementation of the project resulting from the lack of synchronized financing by multiple donors.

Background:

Energy plays a key role in sustainable economic growth. But national economic growth rate, availability of foreign investment, national investment capacity, demand and capacity of consumers to pay service charges have greatly influenced the decision on the fixation of priorities and investment levels towards energy demand and supply management.

There is a big gap between the energy demand and its sustainable supply. Hydropower itself comes in the forefront among different sources of energy available in Nepal. But initial investment requirements are quite heavy in hydropower generation and distribution projects. A review of energy use pattern in the past shows that the traditional means of energy such as wood, fuelwood, shows that the traditional means of energy such as wood, fuelwood, cowdung cakes, agricultural residues have occupied an important place in the supply of national energy. While traditional energy has contributed 95% in the total energy consumption of the country, the contribution of hydropower is below 1%. According to recent statistics, only 9% of the total population has access to electricity.

The main objective of the Eighth Plan is to provide economic justice to the backward community by increasing the national production. In order to achieve this, it is essential to encourage the private sector in the promotion

and diversification of agricultural and industrial production including improvement and expansion of the existing service sector. In fact, it will not be an exaggeration to say that dynamism and diversification in agricultural and industrial sectors is possible only with the availability and effective use of energy at reasonable cost.

The role of energy in our economy is important both from the standpoint of domestic use and export. The pace of industrialisation was sluggish in the past due to the shortage of energy despite sufficient bio and water energy resources in the country. The pace of industrial development can not be accelerated until the obstacle of the availability of energy is removed. Besides, hindrances may be faced in the growth in agricultural production due to shortage of energy in activities such as processing of agricultural produce and lift irrigation. Enough support will also be provided in the development of food processing and cottage industry if water mills, diesel engine and biogas including micro hydro-power project can be promoted for meeting energy needs in the rural areas.

Sufficient benefit can be derived from the implementation of comparatively cheaper major hydro-electric projects of Nepal. National production and productivity can be increased and foreign exchange can also be earned by exporting electricity, if effective hydropower projects and other sources of energy are developed and consolidated in a cost-effective manner. In addition to this, the amount of foreign currency being spent in the import of mineral oils, which can be substituted by national energy, can be reduced. All these facts tend to indicate that high priority has to be accorded to the development of energy.

Human resources and financial investment in large measure are necessary to meet the ever increasing demand for energy by developing the energy resources available in the country. Programmes and strategies relating to energy have, therefore, been formulated so that they meet the national energy needs. Due consideration has been given to the present economic status of the country, the available technology and the national priority, too. More than 70% of the total investment has been made for the development of different sectors of the economy from the government sector itself in the past. But it has become essential for the benefit of the economy to abandon the tradition of only the government sector making such investment. It is necessary to provide proper incentives to attract the investment of the private sector in the development of energy sector for increasing the national production capacity and mobilising the government resources as much as possible towards rural development.

Energy Demand Supply Balance:

Sectorwise Energy Demand Status:

Total energy use by all sectors of the economy in FY 1990/91 was 268,700,000 GJ (Giga Joules), of which 93 percent was used by the domestic sector. Of which 93 percent was used by the domestic sector. Of the remaining energy, the industrial sector used 4 percent and transport, trade and other sectors used 3 percent. Ninety-eight percent of the energy requirement of the domestic sector is being met by the, traditional energy sources. Although the component of the commercial energy is very low in the national energy consumption, 28 percent of the total commercial energy is used by the domestic sector alone. The commercial energy consumption has increased at the rate of 10 percent per annum within the decade beginning FY 1980/81. Sixty-six percent of the total requirement of the industrial sector is being met from the traditional energy and 8 percent from electricity. Demand of electrical energy has been increasing at an average rate of 15 percent per annum over the past decade. The transport sector is mainly dependent upon petroleum fuels. Use of petroleum fuels has been increasing at an average of 5 percent per annum. Similarly, 70 percent of the total energy requirement of the trade sector is being met from the commercial fuel itself. Contribution of electric energy to this sector has been 21 percent. In the same way, about 95 percent of the commercial fuel requirement of the agricultural sector is being met from petroleum fuels and the rest from electric energy. The annual rate of increase in consumption of the commercial fuel in the agricultural sector during the past decade has been limited to 8 percent. It is evident that further intense growth is expected to take place in the consumption of commercial fuel in the coming years due to the diversification in the production of agriculture sector, development of tourist industry, expansion of industrialisation etc.

Because of the fact that the people in the rural areas have been receiving the traditional energy free of cost, it is but natural that the demand for such energy will be increasing in future. Due to this, the environmental problem will still be grave because of accelerated forest clearance.

Present Energy supply status:

1. Electric Energy:

The installed hydropower generation capacity in the country has reached around 233 MW. This is less than 0.3 percent of the total theoretical potential. At present Jhimrik hydroelectric project of Pyuthan with an installed capacity of 12 MW is under construction. The total installed capacity from thermal sources is 55 MW. The

generating capacity of small hydro and diesel power stations in the remote areas is 16 MW. Additional 4.2 MW of hydropower has been made available from mid 1991 from the small hydro-electric projects with the generating capacity of 32. to 245 Kw. An additional 2000 KW will be available from the three small hydro-electric projects now under construction. The peak load of the nation had reached 190 MW in 1991/92.

The construction of Marsyangdi Hydro-electric Project (69 MW), Andhi Khola Hydro-electric Project (5.1 MW) and Small Hydroelectric Projects (1.59 MW) was completed during the interim years (1990-1992). Besides, the construction of 197 km transmission line has also been completed. In addition to the aforementioned physical target, several studies have been completed including feasibility and detailed- engineering studies of projects that can be implemented for future internal consumption and export. A brief description of the projects whose studies have been undertaken at various levels is given in Appendix 1.

Regarding major hydro-electric projects with export potential, studies relating to project preparation of the Karnali Chisapani high dam multipurpose project and necessary works relating to site investigation in order to carry out the feasibility study of the Mahakali (Pancheswor) multipurpose project in the international border have been completed. Talks among officials at different levels of India and Nepal have continued in order to implement these projects. Micro hydroelectric projects have also been constructed in the private sector. Total generation capacity of micro hydropower stations operated in the private sector is estimated at 920 KW. The number of such micro hydropower station in the country is 91.

2. Fuelwood:

Most of the rural households are meeting their energy needs from fuelwood available in the nearby forest free of cost. The urban households, on the other hand, meet part of their energy needs by buying fuelwood. This amounts to less than 10% of the total national requirement. In rural market centres of the hilly region, fuelwood is purchased by tea shops, restaurants and government employees while others meet their needs by collecting fuelwood from the forest. The private traders sell fuelwood through depots and dealership in the urban areas and the Timber Corporation of Nepal (TCN) also sells a small portion of the total fuelwood transaction.

The dense forest area of the country has severely depleted due to unrestricted forest clearance in the past. Forest denudation is estimated to have taken place at the rate of 2.1 percent per annum or 27,000 ha per year during the period beginning FY 1964/65 to FY 1978/79. The total forest area lost by the country during this period is estimated at 382,000 ha.

The total national yearly consumption of fuelwood is 11.7 million mt and the supply of fuelwood in the regions of midhills and the eastern Terai has started to dwindle. The problem has not yet seriously manifested in the Midwestern and Farwestern regions.

The professional woodcutters and the hill descendants are particularly found to be involved in the sale of fuelwood by illegal felling of trees. Besides, a lot of wood/fuelwood is found traded by the households settled near the highways by collecting from the forest in the pretention of their domestic use. In fact, this type of unauthorised cutting and selling has become off-farm employment to most villagers.

3. Other Forms of Bioenergy:

Agricultural residue and cattle waste predominate in other forms of bioenergy. The quantity of agricultural waste used in the form of fuel is estimated to be around 600,000 metric tons with straw content at 50%. Besides, fuel requirement is being met from about 2.3 million mt of cowdung cakes.

4. commercial Fuel:

In commercial fuel, mineral oil or petroleum products and anthracite coal are in most use. Almost the entire demand of these products is met through import. The share of petroleum products in the national energy consumption is 4 percent and its share in the total commercial fuel is 72 percent.

supply Arrangement of Petroleum Products:

Nepal oil Corporation has the monopoly to sell and distribute petroleum products within the country. It purchases kerosene and diesel from the world market and has arranged to receive (motor spirit is commercially known as petroleum or gasoline) aviation fuel, LPG including different oil products in exchange by making the imported

crude oil available to India. This corporation has arranged to sell and distribute these products as necessary upon storing them in the stores of Kathmandu, Amlekhganj, Biratnagar, Bhairahawa, Nepalganj and Dhangadhi.

Supply Arrangement of Coal:

The national requirement of coal is being met through the import due to virtual non-existence of coal mines in Nepal. This responsibility has been entrusted to the Nepal Coal Mines Limited. Depot offices of this corporation have been set up in Birgunj, Biratnagar and Bhairahawa in order to store, sell and distribute coal in important places of the kingdom.

5. Power Exchange Arrangement:

Power exchange has been limited to 20 MW due to insufficient existing interconnection network, though there is a provision to exchange power up to 50 MW with India under the existing power exchange arrangement between the two countries. While Nepal has received electricity from India at some places near the Nepal-India border, Nepal also has made available electricity to India at some other places. The country is in a favourable position to develop major multipurpose water resource projects for export. In this connection, talks are being held to develop some bilateral and multilateral major water resource projects of multipurpose nature.

Internal Energy Resource:

The composition of the energy source of Nepal is based on the admixture of traditional and commercial fuels (forest products, agricultural residue, cowdung, solar and electric power). The country has the capacity to continuously produce the energy equivalent to 1,860 million Giga Joules (GJ) annually. This figure is 50 times higher than the existing estimate of energy consumption. The country can be self-reliant in the energy sector provided the existing energy resources are properly utilized. It will not be an exaggeration to say that hydropower occupies a special position as 79 percent of the energy supply can be made available from this source.

1. Hydropower:

It is estimated that Nepal has a theoretical hydropower potential of 83,000 MW on the basis of the analysis of river flows. Of this, about 42,000 MW can be generated on the basis of economic feasibility studies carried out to date. Studies have proven the existence of sufficient opportunities to develop multipurpose water resource projects with the construction of high dams due to its hill topography. On the basis of studies carried out to date, the hydro-electric projects exceeding 10 MW are 93 in number. In 30 of these projects, there is a possibility of constructing high dam.

2. Fuelwood:

It is estimated that about 8.85 million ha of land in Nepal can be developed into productive forests. At present, 6.73 million ha of the country's land is estimated to be covered by forest and shrubs. Fuelwood is being collected from 50 percent or 3.34 million ha of the area covered by forest and bushes. It is estimated that 5.7 million mt of fuelwood per year can be met in a sustainable manner from this forest area.

Objective:

1. To integrate the national, productive sector as much as possible with the internally available energy and make the country more self-reliant by reducing the production cost of energy.
2. To gradually replace the imported energy with the mobilisation of local source by especially emphasising on the proper development of different sources of energy available in the country.
3. To develop and utilise energy in such a way that it does not adversely affect the environment.

National Energy strategy:

Works will be undertaken for the promotion of technology for increased efficiency in scientific management and energy consumption from forest and other big significant sources at the community level with the objective of meeting the traditional demand and supply of energy. It is necessary for this work to be done through the forest users group. Regarding the commercial fuel, appropriate policy measures will be taken for the creation of environment conducive to gradually proceed towards self-reliance and conservation of energy. Special priority

will be given to the substitution of imported energy by locally, available energy sources in order to solve the problem of balance of payment. The hydropower programmes will be tied up with irrigation, road and energy intensive industrial programmes requiring cheap energy.

It is essential to mobilise investment from within the power sector in order to provide continuity to the development of the power sector. For this purpose, such projects will be selected which are capable of generating maximum profit and mobilising the possible savings.

Keeping the aforementioned facts in view, following strategies will be pursued during the Eighth Plan:

1. Suitable steps will be taken to develop local energy sources in order to bring about sustainability in the national energy consumption keeping in view the technical and economic feasibility.
2. Management of energy consumption of the economically active productive sector and various other means of energy conservation will be adopted with proper study of the sensitivity of the environmental aspects as well.
3. Necessary arrangements will be made to involve both the government and non-government sectors for investment in large, medium and small power projects. Besides, diverse commercial and financial sources will be mobilised.
4. Shortfall in the supply of energy in the short term and long term will be fulfilled from import only in case it can not be met domestically. Agreements relating to the power exchange will be entered into in the best interest of the country with a view to achieving maximum benefit.
5. Social norms and values will be kept in mind while fixing the price of all types of fuels in all cases except in those where the objective of the national development policy may be adversely affected.
6. Concerned agencies will be activated to control environmental problems related to energy supply and use. A balance will be struck in the development of energy, and conservation and promotion of environment.
7. The possibility of transferring the ownership of government institutions involved in power distribution and generation to the private sector will be looked into in consonance with the privatisation policy. Necessary support will be provided to RECAST, Engineering Institute, Biogas Company and similar other industries in generating energy, manufacturing utility equipment and undertaking research for the development of appropriate and safe energy technology at minimum cost. Statistics and information related to energy at the government level will be brought to the notice of general public through educational institutions, mass communication and special programmes, like site exhibition.

Energy policy:

An energy Master Plan will be formulated by determining long term policies and identifying appropriate institutional structure necessary for managing the demand and supply in the energy sector. The Master Plan will pay particular attention to identifying ways of institutional change especially in the power sector because of the necessity to accord top priority to the study of institutional reforms within the field of commercial fuels. The energy policy during the Eighth Plan will be as follows:

1. The Perspective Energy Plan will be used especially in the hydropower sector in order to know hydropower project of different capacities so that an adequate number of projects of various capacities are available for financing feasibility studies.
2. An export oriented strategy will be adopted with regard to power generation from large hydropower projects. This will earn foreign currency needed for development. Maximum bilateral and multilateral co-operation will be mobilised for developing such projects.
3. The development of medium hydropower projects will be promoted by integrating it with the development of energy-intensive industries having comparative advantages.
4. External, internal and joint collaboration with the private sector will be promoted in the development and financing of medium and small scale hydropower projects. Besides, legal and institutional arrangements providing support to exchange and pricing of power will be formulated and implemented.

5. The hydropower sector will be integrated with the irrigation programme. Similarly, industries operating during off-peak hours will be provided electricity at concessional rates.

6. Programmes relating to growth of forest resource products will be implemented through the users group in order to maintain continuity in the supply of traditional energy.

The private sector will be encouraged in the afforestation programme by making available forest land in lease.

7. The management of energy demand regularises the energy need of the urban areas. Price fixation of different sources of energy should reflect the social investment. Therefore the household will be motivated to pursue energy efficient ways and devices. Appropriate and complementary import policies will be formulated for supplying energy necessary for transport equipment and machineries.

8. Requirement of fuelwood and petroleum products of the industrial, commercial and transport sectors will be gradually replaced by electricity generated locally. It will be encouraged to replace the imported fuel by electricity to a practicable extent.

9. Promotion of renewable energy technologies will be encouraged in order to reduce the current dependence on traditional and imported fuels. The private sector will be encouraged to work towards technology transfer, adoptive research and development, indigenisation of hydropower biomass and other renewable energy sectors. Energy demand in the rural areas will be met in a decentralised manner through locally developed technology and devices (cross flow turbines, induction generators and gasifiers).

10. Incentives will be provided to import energy efficient machine and parts of different types used in the industrial and other sectors, other electrically operated devices and kerosene stoves.

11. The use of vehicles consuming more fuel will be discouraged by providing incentives for operating public transport vehicles capable of carrying a large number of passengers. Consumption of imported fuel will be reduced by cutting down the number of government vehicles and discouraging liberal import of vehicles.

12. Some joint venture and technology promotion institutions will be set up with a view to providing support to manufacture energy related equipment. Arrangements will be made for providing the judicial and legal services, defining royalty and patent services procedures, etc. for these institutions.

Hydropower Policy:

1. Hydroelectric projects will be formulated on the basis of demand and priority will be given to the implementation of projects with less per unit production cost and capable of generating comparatively higher economic returns.

1.1 Hydroelectric projects of different levels and capacities will be implemented to meet the medium and long-term need for electricity.

1.2 Emphasis will be given to rural electrification programme in order to provide support to the development of cottage and small industries and agricultural production in the hill and Terai regions.

1.3 Emphasis will be given to the development of electrically operated transport system for gradual substitution of petroleum products.

1.4 Indigenous labour, skill and resource as well as foreign investment and technology will be utilised in the development of hydropower.

1.5 Hydropower generated in excess of the national demand will be exported.

1.6 Use of electricity will be extended in order to provide support to the conservation of forest and environment by reducing the consumption of fuelwood.

1.7 Utilisation of electricity will be diversified.

1.8 Supply and distribution of regularised and made reliable.

- 1.9 Maximum control will be affected in the leakage of electricity generated.
- 1.10 Electricity supply will be increased to provide sufficient energy available to the people and electricity tariff rate will be made more practical.
2. Following policies have been formulated, in order to encourage the involvement of the local autonomous bodies and the private sector (national and foreign) in electricity generation, transmission and distribution works.
- 2.1 No license will be required for the hydroelectric project with up to 100 KW capacities. Information with necessary details, however, has to be given to the concerned agency prior to the initiation of the hydro-electric project between 100 KW to 1,000 KW capacities.
- 2.2 Permission has to be taken by applying to the Ministry of Water Resources for the hydro-electric projects/with more than 1,000 KW capacities. Feasibility study of the project and other necessary information have to be submitted along with the application for permission and decision will be given as to whether the permission is granted within 120 days of the submission of such, details. The duration of license will be maximum 50 years.
- 2.3 Necessary agreement may be entered into for total or partial transfer of the hydro-electric projects, transmission and distribution lines under the ownership of the government to the private sector upon their completion at the government level in order to make them more up-to-date, less expensive and more efficient.
- 2.4 Sole or joint venture of one or more private national investors may be arranged.
- 2.5 Arrangements can be made for joint venture with the government and any one or more national or foreign investors.
- 2.6 Hundred Percent investment from one or more foreign investors will be permitted.
- 2.7 Joint venture of national and foreign investors may be arranged.
- 2.8 Electricity supply can be undertaken in any area under the local grid in isolation without connecting it to the national grid of the Nepal Electricity Authority (hereafter referred to as Authority).
- 2.9 Excess electrical power generated after electrifying any specific area may be negotiated to be supplied to the grid of the Authority.
- 2.10 Entire electric power generated from the large hydroelectric projects will be supplied in bulk into the grid of the Authority.
- 2.11 If electricity is being distributed in any specific area in isolation without obtaining a license and the electrical system of the NEA is extended thereto, and if the private sector desires to sell the hydroelectric plant and transmission and distribution line operated there, the NEA will make arrangements for purchasing the said hydro-electric plant and transmission, and distribution lines as mutually agreed between the NEA and the concerned private entrepreneurs.
- 2.12 Financial institutions will make available concessional loans if the national private sector desires to generate and distribute electricity up to 1000 KW in any rural area.
- 2.13 Private entrepreneurs may negotiate to use the network of the NEA to transmit electricity generated by them.
- 2.14 The hydro-electric project established by the private sector will not be nationalised during the period of the validity of the license.
- 2.15 Projects established with more than 50 percent of the total investment by the foreign company will automatically be transferred to His Majesty's Government after the expiry of time prescribed in the license. No compensation will be given by the government for it. However, if the investor company desires to purchase such hydroelectric plants from His Majesty's Government, it may do so.
- 2.16 No royalty will be imposed on the electric power generated through the hydro-electric plants with up to 1000 KW capacity. In case electricity is produced through hydro-electric plants of more than 1000 KW capacity,

the producer of such electricity will pay the government a sum of Rs. 100 per KW per annum and 2 percent of the average sale price per unit (KWH) as a royalty up to the period of 15 years starting from the date of commercial production. After fifteen years, the producer will pay the government a sum of Rs. 1000 per KW per annum and 10 percent of the average sale price per unit (KW) as a royalty. No royalty will be paid by the private sector, if it transmits and distributes electricity by purchasing it from the electric system of the NEA.

2.17 Income tax exemption will be given to the projects of the private sector generating and distributing electricity up to 1000 KW capacity hydro-electric project.

2.18 A hydro-electric project, constructed under the investment of the private sector, producing more than 1000 KW will be granted income tax exemption for a period of fifteen years starting from the date of its commercial production.

2.19 Any private entrepreneur who constructs the electric substation and transmits and extends the distribution lines will be granted income tax exemption for a period of 10 years.

2.20 If private companies assume, on contract or purchase, the operation maintenance and management of the hydroelectric plant or transmission and distribution lines under the ownership of His Majesty's Government, such companies will be granted income tax exemption for a period of 5 years.

2.21 The income tax will be less than 10 percent of the corporate income tax which the government imposes from time to time.

2.22 If the investor re-invests in the hydro-electric project in order to diversify the project or to expand its established capacity by 25 percent or more, or to modernise the technology or develop a subsidiary industry, such investor may deduct an amount of 50 percent of the new additional fixed asset from the taxable income of such hydro-electric projects. Such deduction may be made at a time or from time to time within three years.

2.23 Customs duty and sales tax will be levied at the prevailing rate on the import of construction equipment, machinery tools and their spare parts required for operation and maintenance, if they are produced and sold by the local industries. Only one percent of the customs duty will be levied on the import of goods if they are not produced in Nepal. Import license fee, sales tax etc., will not be levied on them.

2.24 All facilities concerning the exchange of foreign currency will be provided to a foreign individual, firm or company who invests in the construction of the project for generating, transmitting and distributing the electricity at the private sector under the foreign investment and single door policy.

2.25 If the foreign currency is required for repayment of loan or its interest or repatriation of the investment which was invested as a loan or share capital for the hydroelectric project, His Majesty's Government may make the foreign currency available to such private entrepreneur at the prevalent market exchange rate.

2.26 The private producer may fix the selling price of the electricity produced by itself from the hydro-electric project having a capacity of up to 1000 KW and operate / and distribute it accordingly.

2.27 If the electricity produced by the private sector from the hydro-electric project having a capacity of more than 1000 KW is distributed in an isolated, way without making any connection with the electric system of the NEA, the private producer may fix the selling price of the electricity in accordance with paragraph 2.26 above. However, the private producer, while fixing such selling price, may account that a dividend of up to 25 percent is accrued on the share capital.

2.28 The electric power generated from the hydropower station of the private sector may be sold or purchased by mutual understanding between the private producer and the NEA. The selling rate of such electricity will be fixed, as agreed to by both parties, on the basis of the fixed percentage of the sunk cost or cost plus or fixed percentage of the average selling price of NEA.

2.29 While fixing the price as above, the private investor may depreciate all the investment made for the hydropower development in such a way that the total investment is realised, on an average, within a period of 25 years.

2.30 A separate Electricity Tariff Commission will be constituted to fix the selling price of electricity. The selling price of electricity to be utilised in the national electric system or the system of the NEA will be

determined on the recommendation of the said commission. The selling price will be fixed realistically on the basis of the cost. The weightage of the investment in foreign currency will also be taken into consideration while fixing the selling price.

2.31 If the electricity generated -in the country is to be, exported to a foreign country, it will be done in accordance with the agreement made between His Majesty's Government and the exporter. While exporting electricity, an export tax as prescribed by His Majesty's Government will be levied.

2.32 A Hydro-electric Development Unit will be set up in the Ministry of - Water Resources in order to promote the private sector's participation in the hydro-electric projects, to make optimum utilisation of water resources, to approve projects with a capacity of more than 1000 KW, to render necessary assistance to the private sector in the operation of the project and to follow up on the aforesaid works.

2.33 If it is feasible from the technical point of view the private sector may supply electricity produced by it to a point of the present electric system in a region and take it from another point of any electric system or may export it to a foreign country. It will be required to pay the required fee for such arrangement.

2.34 The Ministry of Water Resources will, from time to time, provide a list of economically attractive hydro-electric projects to the private sectors.

2.35 His Majesty's Government will, on request, make available land to the private sector for the construction of the hydro-electric project on the same principles as it acquires land for institution under, the Land Acquisition Act, 2034(1977). If the land is owned by the government, it will be made available on lease throughout the licensed period.

2.36 The license holder will have to utilise the local labour and skill to the maximum while constructing or operating a hydroelectric project.

2.37 If the license holder is a foreigner, he will make arrangements for technology transfer to the Nepalese citizens in the course of performing the work.

2.38 While operating the hydro-electric project, it will be operated in such a way that the local people are also directly benefited from such projects.

2.39 The construction or operation of the hydro-electric project will be made in such a way that it would have minimum adverse effect on the environment.

2.40 Facilities to be provided to the private, national as well as foreign investors will be more in hydro-electric projects than those given to other industries.

2.41 Various acts relating to electricity, water resources, banking, foreign investment, decentralisation and local agency will be amended from time to time in the spirit of implementing the proposed policies.

2.42 Appropriate changes will be made in the interrelationships of the Ministry of Water Resources, Water and Energy Commission and Nepal Electricity Authority for the effective implementation of the principle of institutional pluralisation. The composition of the Management Board will be determined in order to develop Nepal Electricity Authority as an autonomous institution. The water and Energy Commission will render assistance to the National Planning Commission in the development of energy policy.

2.43 Road and other infrastructural arrangements to the sites of the hydro-electric projects to be developed in future will be done in a planned manner through the concerned agencies.

2.44 His Majesty's Government will provide necessary hydrological, geological and topographical data as available and maps as required in order to involve the private investors in the hydro-electric projects.

2.45 Rural electrification programme will be implemented by supplying electricity from the central grid to the possible extent. If this is not feasible from financial point of view, it will be done through the execution of small hydro-electric projects. Priority will be given to the electrification of the district headquarters.

2.46 Necessary arrangements will be made to maintain a balance between the demand for and supply of electricity to different economic sectors.

2.47 Talks relating to different major and multipurpose water resource projects and other necessary works will be continued with a view to earning maximum foreign exchange from the export of hydro-electric power.

Alternate Energy Policy:

1. Necessary measures will be taken to set up the micro hydropower stations and develop the improved watermills and turbines from the small rivulets flowing locally in the rural areas.
2. Encouragement will be provided to the development of appropriate technology and necessary investment in the generation of mechanical and electrical power by harnessing the rivers with a view to supporting the development of the rural area by means of food processing, development of cottage industry, and rural electrification etc. The private entrepreneurs, Village and District Development Committees will all be mobilised in this work.
3. Development of necessary technical manpower and collection of basic data will be carried out for the development and promoting of biogas, solar energy and wind power. Besides, appropriate places will be identified for the implementation of the programmes of such nature.
4. The import of equipment related to the alternate energy technology and raw materials will be encouraged by providing incentives on tax, custom etc. Financial grant will be provided to the users of devices related to alternate energy, if found necessary. Besides, technical and financial support will be extended to the non-governmental institution and private sector towards the promotion of alternative energy technologies.
5. Institutional arrangements will be made by setting up an alternate energy agency to implement and coordinate different energy related programmes. Necessary publicity arrangements will also be made for the development of alternate energy.
6. With the promotion of bio-gas plants, concrete steps will be taken to extend their use in order to minimise the destruction of forest for fuelwood. Effective arrangements will be made for the extensive use of improved stoves in order to reduce consumption of fuelwood in the rural areas. The extension of solar energy based equipment such as solar cooker, solar water heater; solar dryer etc. will be emphasized.
7. The governmental and non-governmental organisations, private sector and educational institutions will be mobilised to create public awareness about the usefulness and use of alternate energy technologies.
8. The private sector will be inspired to play a significant role in the development of alternate energy. The private sector will be involved in adoptive research, technology transfer, technology development; distribution, installation and repair and maintenance.
9. A long term perspective plan will be formulated for the development of alternate energy.

Energy Sector Programme:

Electricity:

Following programmes will be implemented in order to achieve the objectives and policies stated in the Eighth Plan:

a Electricity Generation, strengthening and supply Arrangement

The programmes pertaining to construction of new hydroelectric projects, consolidation, repair and maintenance of existing hydropower stations-and procurement of electricity as per the power exchange agreement between Nepal and India will be implemented.

Construction of New Hydroelectric Projects: All construction works of the Jhimruk hydro-electric project with an installed capacity of 12.5 MW now under construction in Pyutha_ will be completed. Construction of the Kaligandaki I A I hydro-electric project with an installed capacity of 100 MW will be started in order to generate power from the Kaligandaki river in the western development region. In addition to this, works relating to the first phase of the Arun-III hydro-electric project will be initiated in order to generate power from the Arun river. Generation capacity of the first phase will be 201 MW. A total of 29.7 MW of additional hydropower will be available during this, plan period with the respective contribution of 12.2 MW, 12.5 and 0.5 MW by refurbishing Trishuli-Devighat hydropower stations, completing the Jhimruk hydro-electric project and by various other small

hydro-electric projects.

Arrangements will be made for the projects like Khimti and Modi to be implemented by the private sector entrepreneurs during the Eighth Plan in accordance with the policy of involving the private sector in the field of hydro-electric power generation.

strengthening of the Existing Hydropower stations: The existing generating capacity of the Trishuli and Devighat hydropower stations in Nuwakot district will be increased as per the policy of increasing the existing generating capacity.

The generating capacity of the Trishuli and Devighat hydropower stations will be increased during this plan period by carrying out improvement and consolidation measures. From this, a total of 280,000 kilowatt hour of electric energy will be generated with the addition of about 95,000 kilowatt hour of electric energy to the existing 185,000 kilowatt hour of electric energy being generated annually. This will lead to an increase of about 12.2 MW of power generation capacity.

Alternate Energy Supply Arrangement: About 12,800 million cubic meters of natural gas is, estimated to be available within the Kathmandu valley. The natural gas is being used nowadays as domestic fuel in limited quantities. Detailed feasibility study will be undertaken about the possibility of generating power from that gas. The gas project will be implemented in the private sector if it is financially feasible.

Arrangement of Power supply from India: Power exchange is currently limited to 20 MW due to insufficient interconnection network of NEA although there is provision for exchange of power up to 50 MW with India under the existing power exchange arrangement between the two countries. Therefore, with the construction of Duhabi (Nepal)- Kataiya (India) transmission line, arrangements will be made for the additional supply of power, too. In addition to this, 10 million units of electric energy will be annually available from the Tanakpur hydro-electric project of India as per the understanding reached between Nepal and India in that regard.

Apart from the hydro-electric projects mentioned in Appendix 2B (Trishuli-Devighat, Jhimruk, Modi, Khimti, Kali Gandaki 'A') electric load management (15 MW), the deficit in the demand/supply situation in electric energy in the coming years will be met through alternate energy arrangement (natural gas - about 10 MW) and the remaining 50 MW through import from India.

b. Construction, Extension and strengthening of Electric Transmission Line

Programmes for the construction, extension and improvement of the electric transmission line have been incorporated to distribute the electric power generated from different power stations in the kingdom with minimum leakage to different places and settlements as per demand. Towards the construction of the electric transmission line, construction of a 42 km long Duhabi-Kataiya 132 KV transmission line will be completed. This will facilitate the import of electric energy from India under the prevailing power exchange agreement.

Similarly, construction of 200 km long 132 KV transmission line between Banke (Kohalpur) and Kanchanpur (Mahendranagar) of the remaining portion of the central grid is now under construction while 105 km long Atariya-Dadeldhura-Dipayal 66 KV transmission line and various 100 km long 33 KV sub-grid lines will also be completed within the plan period. In addition to this, 132 KV and 66 KV transmission lines passing through high electricity consumption areas especially of the central grid i.e. Biratnagar, Kathmandu valley and Hetauda-Bharatpur, Birganj and Butwal-Bharatpur sections will be strengthened. The present capacity of the grid substations of the high voltage transmission lines will be increased as per the, projected demand. Interconnection of the transmission lines will be effected in order to efficiently operate the existing power exchange programme with India.

c. strengthening of the Distribution system

As regards the strengthening of the distribution system, consolidation works of the distribution at Biratnagar, Janakpur, Pokhara and Nepalganj will be completed in order to provide high quality electricity services to the existing urban consumers. In addition to this, strengthening and extensive expansion work in the existing distribution system will be done in order to provide sufficient and high quality services for the increased urbanisation and industrialisation at Dharan, Hetauda, Parwanipur, Birgunj, Butwal and Siddharthanagar (Bhairahawa). A systematic consolidation programme of the distribution system in Kathmandu valley, which consumes the highest electric energy in the kingdom, will be formulated and implemented. The strengthening programme will raise the percentage of population with access to electricity in the urban areas to 75 percent from

the existing 62 percent with an estimated addition of about, 60,000 consumers within the Eighth Plan.

d. Rural Electrification

Electricity is yet to be extended to many rural areas of the country. This programme has, therefore, been implemented with a view to gradually electrifying the rural areas where majority of the people live. The central grid system and micro hydro-electric projects will be used for achieving rural electrification.

Electrification from the Central Grid: Electrification work will be undertaken in about 1,200 village in Ilam, Jhapa, Sunsari, Morang, Dhanusha, Mahottari, Sarlahi, Siraha, Rautahat, Chitawan, Nawalparasi, Rupandehi, Kapilbastu, Kaski, Gulmi, Arghakhanchi, Dang, Banke, Bardia and Surkhet districts having high population densities. This work will be carried out according to the electrification programme up to FY 1997/98 with the financing from the sixth and seventh power projects funded by the Asian Development Bank. This programme will benefit about 950,000 people of those areas. In addition to this, arrangements will be made for the implementation of other electrification projects identified by the ten year Master Plan.

Electrification by Small Hydro-electric projects in Isolation: Small hydro-electric projects will be constructed in order to meet the rural electricity demand in the hills and Himalayan region. Electricity generation capacity under this programme will be increased by 3,260 KW during the plan period from the continuing and proposed projects. Construction of the Namche (600 KW), Achham (400 KW) and Tatopani second phase (1,000 KW) projects which were at the construction stage during the Seventh Plan period will be completed. In addition to these, the Khotang (500 KW), Kalikot (600 KW) and Dolpa (160 KW) projects will be constructed. Besides, at least five micro hydro-electric schemes for each hill district will be prepared and made available to the private sector with the objective of mobilising the private sector in the generation of hydropower.

e. Survey, Feasibility Study and Engineering Design

Survey, feasibility study and design works of the following projects will be carried out during the Eighth Plan period:

Financial resources will be sought after completing the detailed engineering design for implementation of the West Seti hydro-electric project (360 MW) and the Saptagandaki (225 MW) multipurpose project incorporating the irrigation component into it.

Taking into consideration the necessity of selecting hydro-electric projects to meet the projected electricity demand in the beginning of decade 2060 BS (2003 AD) and thereafter, detailed engineering studies of appropriate projects meeting the electric load of the central grid will be conducted from among the projects such as the Upper Karnali (240 MW), B_gmati (140 MW), Kamala and Budhigandaki (600 MW). The additional or updating studies regarding these projects have been undertaken following the completion of pre-feasibility and feasibility studies.

Feasibility studies of the Bhotekosi, Khimti Khola, Naumure and Lower Arun hydro-electric projects whose preliminary and pre-feasibility studies were undertaken in the Seventh Plan, will also be completed.

As the generation capacities of the existing small hydro-electric stations in the hill and remote district headquarter and other important places are about to be fully utilised, studies will be conducted to seek appropriate power additions and alternatives for these places. A Master Plan for small hydro-electric projects will be prepared, and project implementation as well as additional studies will be carried out as required.

f. Management of Electricity Demand

In addition to the aforementioned programmes, necessary institutional arrangements will be made to effectively control the electricity leakage. Besides, extensive publicity programmes will be launched for load management and the use of efficient energy devices and other electric equipment.

g. Institutional Strengthening of the Nepal Electricity Authority

Strengthening the financial management and reforming general administrative management within NEA have become imperative in the policy context of developing NEA as an autonomous institution.

In this context, necessary changes will be made in the management board of the Nepal Electricity Authority. This Authority has to be made capable and efficient in order to execute new projects effectively. This institution has

initiated a programme to gradually reduce the number of employees because of the urgency to improve administrative management and curtail the administrative expenditure. Encouragement will be given to further this process.

The NEA will be inspired to undertake compulsory annual auditing of accounts in order to strengthen the financial management. The NEA will adopt required processes for curtailing unnecessary expenses. Besides, necessary measures will be taken to augment earning and profit. The Authority will be motivated towards increasing its income by adopting programmes for realising account receivables, reducing the unnecessary inventory and the selling of surplus electricity.

The electricity tariff, however, will be kept as low as possible by cutting down expenses and adopting income generating processes. A taskforce has already been set up in order to enhance this process. Besides, the NEA will implement an effective programme for the load management of electricity to reduce peak load and electricity leakage.

The authority will be made capable of transmitting electric energy compatible with the policy of encouraging the private sector in the generation and distribution of electric energy. Necessary institutional strengthening of the NEA will also be undertaken to achieve this objective.

h. Electricity Export

Talks are being held with India about the power export projects i.e. the Karnali (Chisapani) and Pancheswor multipurpose projects, Budhigandaki high dam project and Saptakosi multipurpose project in the existing committees at different levels between the two countries. -Regarding these projects, following programmes have been incorporated:

The Karnali (Chisapani) Multipurpose project: Arrangements will be made to carry out additional studies relating to winter sediment, environment and resettlement.

The Pancheswor Multipurpose Project: Having completed the necessary field survey for feasibility study, arrangements will be made to move ahead with the preparation of the detailed project report in order to expedite the implementation of this project.

The Budhigandaki High Dam project: The pre-feasibility study of this project has been completed. The detailed project report will be prepared subsequent to the undertaking of additional survey with the financial assistance of the government of India.

The Sapta Kosi Multipurpose Project: Arrangements will be made to undertake the feasibility study upon completion of the inception report subsequent to the composition of 'working group of experts between Nepal and India relating to this project.

Alternate Energy Development Programmes:

a. Development of Micro Hydro-electric project

Hydropower generation capacity will be increased by 5,000 KW during the plan period by implementing different micro hydroelectric projects. Of this target, 1250 KW, 1250 KW, 1250 KW, 750 KW and 500 KW respectively will be generated in the Eastern, Central, Western, Midwestern and Far Western regions. These targets are based on probable demand for electricity. If increased demand is to be encountered, the generation capacity will be increased accordingly. The private sector will be encouraged to achieve the stipulated targets.

b. Bio-gas Energy Development Programme

An assessment of the livestock population in Nepal reveals that biogas plants capable of catering to the requirement of about one million households can be theoretically constructed. It is estimated that about 2400 MW equivalent of power can be obtained from these plants. There is a target to exploit up to 3% of the total potential during the Eighth Plan. During this period, 30,000 biogas plants will be installed with 12,000 plants in the hilly region and the remaining 18,000 plants in the Terai region. Region wise, 6,500 plants in the eastern-region, 8,500 plants in the central region, 8,500 plants in the western region, 4,500 plants in the mid-western region and 2,000 plants in the far-western region are targeted to be installed. The bio-gas installation capacity, however, will be increased as per demand.

It is estimated that power equivalent to 72 MW will be available from the targetted 30,000 biogas plants. Besides, these plants- will help to reduce the- use of chemical fertiliser with the release of high quality compost manure.

Setting up of private companies will be encouraged to achieve the above biogas installation target. Necessary loan facility will be made available from financial agencies to the interested parties. Besides, action will be taken to provide support to the production of manpower required for the implementation of this progrmme.

c. Solar Energy Development Programme

There is a great prospect for utilizing the incessant solar energy in Nepal. About 300 days per year on an average are sunny due to the topographical and aspect features with a capacity to produce an average of 700 t() 809 watts per squaremetre. Since past few years, the solar energy is increasingly being put to domestic and other uses. The devices using solar energy are solar water heater, solar dryer, solar cooker, solar pump and solar generator.

The solar water heater has become popular in the urban area and it is estimated that there are 20 manufacturers selling this type of equipment. The solar dryer is at the experimental stage. Similarly, the use of solar cooker is also at the experimental stage and its cost, too, is very high. Regarding the solar pump, the Agriculture Development Bank has made experimental uses in the past. Solar photovoltaic cells have been used to a certain extent in the telecommunication and aviation sectors. Though it is somewhat expensive in the initial stage from the cost consideration, it has been found useful in the rural areas where other forms of energy may not be available.

During this plan period, 5,000 solar water heaters, 2,500 solar dryers and 5,000 solar cookers _are targeted to be produced and distributed. Besides, a Master Plan will be prepared for the diversification of the use of solar energy. An appropriate policy environment will be created to involve the private sector in the production of solar energy related equipment upon demonstration of technology about the use of solar energy in different sectors.

d. wind Energy Development Programme

Utilisation of wind energy is still at the research stage in Nepal. But while considering its geographical feature, wind velocity etc., there is a possibility of developing wind energy. A preliminary study on wind energy in the Mustang region has already been completed which will be used to prepare and implement the programme in the first year of the Eighth plan.

e. Biomass Energy Development Programme

There is a great importance o(biomass energy in Nepal. It has already been mentioned above that more than 95 percent of the total energy consumption is being met from forest and biomass energy. But most of this energy is being wasted for nothing due to the unscientific use of fuelwood and other biogas fuels. A major contribution to the national energy scenario will be made if a technology is developed for their efficient use. A publicity campaign will, therefore, be launched for proper use of fuelwood and other biogas energy to bring about the use of technologies like densification (briquette production), gasification, carbonisation and the improved stoves. During the Eighth Plan, 250, 000 improved stoves (100,000 in the hills and 150,000 in the Terai) will be distributed.

Impiementation Arrangement:

The mobilisation of governmental and non-governmental agencies will be accele" _rated to bridge the widening gap between electricity demand and supply as it has surfaced as the main constraint. Nepal Electricity Authority will implement the Arun-III, Kaligandaki and the west seti project with respective installed capacities of 201 MW, 100 MH and 360 MW.The non-governmental agencies will be encouraged to implement Jhimruk, Khimti and Modi with the installed capacities of 12, 48 and 10 MW respectively together with other smaller hydro-electric projects. Arrangements will be made to implement the micro hydro-electric projects in various hill districts through private investors at the local leve14 As for alternate energy, the private sector will be involved in the promotion of biogas, microhydro-electric project, improved stove, solar water heater etc.

A programme will be implemented for a massive extension of the installation of bio-gas plants through the Agriculture Development Bank, other financial institutions, the private sector and non governmental organisations in co-ordination with forest and environment conservation programmes to control forest destruction. The plants will be installed with people's participation at the individual and community levels. For

this, His Majesty's Government will continue to bear up to Rs. 7,000 in the Terai and Rs. 10,000 in the hills with the remaining cost to be borne by the beneficiaries. Arrangements in this regard have been made for the users to obtain loan from the Agriculture Development Bank and other financial institutions. Technical services, training programme and Research and Development will be conducted through the Biogas and Agriculture Equipment Development Private Ltd. in order to increasingly involve the private sector in the installation of biogas plants.

Similarly, the Agriculture Development Bank, other financial institutions, non-governmental organisations as well as the private sector will be mobilised to expand the rural electrification programme. This programme will also be implemented at individual and community levels. For this programme, His Majesty's Government will bear 50 percent and 75 percent of the total cost estimates respectively in the midhill region and the Himalayan region and the remaining balance will have to be borne by the users. Loan facilities to that extent will be made available from the Agriculture Development Bank and other financial institutions.

Arrangements will be made to make technical services available through the private entrepreneurs and private organisations.

Expenditure Details:

a. Financial arrangement for the implementation of different programmes in the energy sector is as follows:

S.No.	Programme	Investment (Rs. in Million)		
		Government Sector*	Private Sector	Total
1.	Power generation and extension etc.			
	a. Power generation, Consolidation and supply Management	168300	70000	238300
	b. Construction, extension and improvement of transmission line	16140	–	16140
	c. Improvement in distribution system	10900	–	10900
	d. Rural electrification	18000	–	18000
	e. Survey, feasibility study and engineering design	20000	–	20000
	f. Management of electricity demand	500	–	500
	Total	233840	70000	303840
2.	Development of alternative energy			
	a. Small hydro-electric project, development programme	500	2500	3000
	b. Biogas energy development programme	2500	8000	10500
	c. Solar energy development programme	100	1900	2000
	d. Wind energy development programme	50	250	300
	e. Biogas energy development programme	200	500	700
	Total	3350	13150	16500
3.	Grand Total (1+2)	237190	83150	320340

Appendix-1

S.No.	Outlines of Hydro-electric Project	Details of Probable Projects		
		Capacity (Megawatt)	A verage Energy Production (Giga watt He.)	State of Project Preparation
1.	Storage (Multipurpose Chisapani High Dam.	10,500	20,830	Feasibility study
2.	Kaligandaki-2	660	2,660,,	
3.	Budhigandaki	600	2,495,,	
4.	West Seti	360	2,437,,	
5.	Naumure	245	933	Perliminary Study
6.	Bagmati	140	625	First Phase Feasibility Study
7.	Kankai	60	200	Feasibility Study

Run of River (Hydro-electric)			
8.	Arun-3	402	2,876 Detailed Engineering Design
9.	Lower Arun	350	2,548 Pre-feasibility Study
10.	Upper Arun	335	2,276 Feasibility Study
11.	Upper Kamali	240	1,665 Pre-feasibility Study
12.	Sapia Gandaki	225	1,609 Feasibility Study
13.	Kali Gandaki-A	100	602,,
14.	Khimti	60	409 Pre-feasibility Study
15.	Bhotc Kosi	48	359,,
16.	Kulekhani-3	22	26 Feasibility Study

Appendix 2
Electric Energy Demand and Supply Balance

Exhibit
Visual Chart "A"

Plan Period	B.S.	A.D.	Maximum Load		Electric Energy		Less Excess		Leakage Proportion (%)	Load Factor (%)
			Demand	Supply	Demand	Supply	Demand	Supply		
			MW		GWh		MW	GWh		
Eighth	2049/50	1992/93	232	230	997	976	-2	-21	24.6	49
	2050/51	1993/94	261	242	1128	1071	-19	-57	24.0	49
	2051/52	1994/95	288	254	1249	1155	-34	-94	23.2	49
	2052/53	1995/96	314	254	1370	1166	-60	-204	22.5	49
	2053/54	1996/97	347	254	1520	1177	-93	-343	21.7	50
Ninth	2054/55	1997/98	379	254	1668	1188	-125	-480	21.0	50
	2055/56	1998/99	416	354	1835	1790	-62	-45	20.2	50
	2056/57	1999/2000	453	354	2006	1806	-99	-200	19.5	50
	2057/58	2000/01	498	354	2215	1823	-144	-392	18.7	50
	2058/59	2001/02	547	555	2443	2875	8	432	18.0	50
Tenth	2059/60	2002/03	604	555	2711	2900	-49	189	18.0	51
	2060/61	2003/04	666	555	3001	2900	-111	-101	18.0	51
	2061/62	2004/05	734	555	3320	2900	-179	-420	18.0	51
	2062/63	2005/06	813	555	3689	2900	-258	-789	18.0	51
	2063/64	2006/07	895	555	4077	2900	-340	-1177	18.0	51

N.S.: Probable fiscal years for the completion of hydro-electric projects are as follows:

Kaligandaki A 1998/99 (2055/56)
Arun - 3 2001/02 (2058/59)

Exihibit
Visual Chart "B"

Plan Period	B.S.	A.D.	Maximum Load		Electric Energy		Less Excess		Leakage Propertion (%)	Load Factor (%)
			Dema nd	Supply	Demand	Supply	Demand	Supply		
Eighth	2049/50	1992/93	232	230	997	976	-2	-21	24.8	49
	2050/51	1993/94	261	242	1128	1071	-19	-57	24.0	49
	2051/52	1994/95	288	254	1249	1155	-34	-94	23.2	49
	2052/53	1995/96	314	254	1370	1166	-60	-204	22.5	49
	2053/54	1996/97	347	264	1520	1252	-83	-268	21.7	50
Ninth	2054/55	1997/98	379	324	1668	1604	-55	-63	21.0	50
	2055/56	1998/99	416	424	1835	2206	8	371	20.2	50
	2056/57	1999/2000	453	424	2006	2222	-29	216	19.5	50
	2057/58	2000/01	498	424	2215	2239	-74	25	18.7	50
	2058/59	2001/02	547	625	2443	3291	78	848	18.0	51
Tenth	2059/60	2002/03	604	625	2711	3316	21	605	18.0	51
	2060/61	2003/04	666	625	3001	3316	-41	315	18.0	51
	2061/62	2004/05	734	625	3320	3316	-109	-4	18.0	51
	2062/63	2005/06	813	625	3689	3316	-188	-373	18.0	51
	2063/64	2006/07	895	625	4077	3316	-270	-761	18.0	51

N.B.: probable fiscal years for the completion of hydro-electric projects are as follows:

Modi	1996/97 (2053/54)
Khimti	1997/98 (2054/55)
Kaligandaki A	1998/99 (2055/56)
Arun - 3	2001/02 (2058/59)

Hydrology and Meteorology

Introduction

Prior to the implementation of different projects related to water resources development, it is essential to collect and analyse different data pertaining to river flow and quantity of the concerned rivers associated with the projects, and the data on weathers and floods. Although these data are vital to the development of agriculture and water resources, due importance does not seem to have been attached to the use of these data in the implementation of water resources development projects during the past plan periods. It is a fact that the protection of projects with major investments can be secured only by means of the analysis of hydro-meteorological data in the fact of natural hazards caused by irregular climatic phenomena such as drought and excessive rain. Therefore, the collection and analysis of such data play a very important role in the development of agriculture and water resources.

Progress during the Seventh Plan period

1. Five rain gauges, 12 climatological and two aerosynoptic stations were set up' during the Seventh Plan period. Similarly, 'climatological record of Nepal' covering upto 1986 was brought out.
2. Commensurate with the objective of the collection and analysis of the data on rivers for the development of different water resources projects, the maintenance of hydrological stations and stream gauging work was continued. Installation and maintenance of 60 hydrological stations, refurbishing of sixteen numbers of cable ways and thirteen automatic water level recorders and installation of 15 sediment sample stations were accomplished.
3. Different observation and measurement stations were kept in operation; data books were brought out and other regular programmes kept in operation as usual during the two year period covering F.Y. 1990/91 and F.Y. 1991/92.

Background of the Eighth Plan

The Nepalese economy being predominantly based on agriculture, proper information on weather in the context agriculture and on river flows for the development of irrigation can help render the irrigation systems more reliable. As water resource alone is the principal resource of the country, its proper utilization may provide significant support to the national economy. Similarly, agriculture and other sectors may be supported by way of the development of wind and solar energy based on their data. The level of the negative impact of air pollution, caused by fast growing population in the country especially in the Kathmandu Valley, and increased urbanization and industrialization will be determined on the basis of such data. In the present context of continued reduction in soil fertility, the quantitative analysis of the nature of sediment flow from the rivers and the necessity of conducting the study on pollution surfacing now on the rivers as well have become imperative.

The Eighth Plan relating to hydrology and meteorology has been formulate taking these factors into full consideration.

Existing Problems

1. Nonreliability of data collected from various sources; inability to measure correctly; and deficiency in the matter of supervision.
2. Nonavailability of sufficient resources and skilled technical manpower for the processing of collected data and lack of effective improvement in data management. Inability to mobilize necessary resources in the processing of data on the expiry of the assistance provided by such organizations as UNDP and WMO in particular.
3. Inability to modernize with time the equipment of the observation and measurement stations.
4. Nonexistence of a laboratory for examining the qualitative status of the current meters.
5. Inability to procure spares in required quantities even though workshop is available for repair and maintenance of equipment.
6. Inability to follow in an effective way the guidelines for the operation and inspection of equipment, and inadequate training.

7. Shortage of trained staff in the collection of data.
8. Deficit of sources and means to make the processed data readily available.
9. Lack of effective coordination between the water resources planning and implementation units.

Objectives

1. To avail weather forecast and necessary data for agriculture and water resources development.
2. To avail hydro-meteorological data and weather forecast necessary for the agriculture sector.
3. To study the river regime for hydro-power generation, development of irrigation and drinking water projects.
4. To forecast floods.
5. To make available data on solar insolation and wind patterns sources with a view to developing alternative energy.
6. To avail necessary data on study relating to air pollution in order to formulate health and industrial policies.
7. To analyse the sediment loads in the river flow and study the water quality.
8. To provide support from planning stage to implementation level to water resources after conducting the study relating to snow and glacier melt in snow covered areas.

Following priority has been fixed in the implementation of programmes relating to hydrology and meteorology during the plan period.

1. Special importance will be given to the study of snow clad areas of the Himalayan belt.
2. Reliable data will be made available for water resource and agriculture sectors.
3. Study relating to air pollution will be initiated.
4. Flood forecasting of major rivers will be undertaken on a regular basis.
5. Improvement will be brought about in the operation of all stations installed till date.
6. The publication of data books will be continued after effecting qualitative improvement in the analysis and processing of the collected data.
7. Studies of major river basins as a whole will be undertaken.
8. Support will be provided to water resource projects by extending collection and analysis works of the sediment samples. Similarly analytical studies relating to the chemical properties of water will be initiated.

Policies

1. Data pertaining to weather will be collected on a nationwide basis for water resources development flood control and watershed management.
2. Effective arrangements will be made through flood forecasting to minimize the loss of life and property.
3. Arrangements will be made to forward data collected at various places to data processing centres through the fastest means.
4. Data essential for the development of wind and solar energy will be collected.
5. Arrangements will be made to make essential data available to all government, semi-government, non-government' and. private sector agencies involved in the development of irrigation and energy.
6. Collected data will publish every year.

7. Hydro-meteorological instruments measuring quality and characteristics will be improved and modernized.
8. The density of stations engaged in hydro-meteorological study will continue to be improved according to the international standards.
9. The guidelines for the operation of hydro-meteorological equipment and processing will be followed after making necessary effective modifications.
10. Arrangements will be made to get most of the processing works now being done at the central level carried out at regional offices.
11. Search for Technical assistance in the field of hydro-meteorology from the international organizations and different countries will be continued.
12. More emphasis will be given on studies and data collection relating to wind, water, environmental pollution and climatic change.
13. Suitable training will be arranged for unskilled and semiskilled employees.
14. In order to bring about dynamism in the studies and research on glaciers and snow clad areas in the northern belt and to assess their impact on the atmosphere and environment, modern technologies such as remote sensing and geographical information system will be used.

Allocation of Physical Targets

1. Fifty additional hydrological stations in total will be installed during the Eighth Plan with 5 in the Himalayan region, 15 in Hills and 14 in the Terai. In this way, the number of hydrological stations will be increased to 150 at the end of the plan period.
2. Studies on sediment and water quality of 20 numbers of major rivers of the kingdom will be conducted,
3. Data collection relating to climate and flow measurement which has been introduced in most parts of the kingdom, will be continued.
4. Hydro-meteorological stations will be established in 5 different places and rain gauge stations in 10 different places of the Eastern Development Region.
5. Centres measuring air pollution will be set up at five places in Kathmandu Valley.
6. Data pertaining to glaciers and snow melt will be collected from the hydro-meteorological stations in the Himalayan region of the Kingdom. .
7. Similarly, study centres pertaining to wind pressure and solar energy will be set up in four appropriate places.
8. A long term plan will be formulated and gradually implemented.

Sectoral targets and Programmes

Current

1. Management of hydro-meteorological data

Data collection and analysis pertaining to water-flow and climate from the hydro-meteorological stations set up in about 252 places of the Kingdom will be carried out on a regular basis.

2. Study of the Water Quality

Data and details relating to sediment and water quality will be collected from 20 major rivers of the Kingdom and made available to water resources and watershed conservation projects.

3. Water Level Forecast

The task of forecasting daily water level during flood in the rainy season or minimum flow during the dry season will be carried out. Support will be provided to water resource projects through the collection of flood data and flood forecasting.

Proposed

1. Agro-Climatological zoning

This programme will be initiated in the entire part of the Eastern Development Region during this plan period. Climatic zoning is targeted by this programme for specific crop compatible with crop diversification and the promotion of agro-enterprise. Five weather) stations and". ten rain gauge stations will be set up under this programme.

2. Air Pollution study

Equipment relating to air pollution is targeted to be installed to make the public aware about the negative impact in health from air pollution resulting from the increased population in the Kathmandu Valley and the continuously growing industrialization. People will be informed about the outcome of the analysis of the data collected from the air pollution equipment. There is a programme to setup five such centres in the Kathmandu Valley.

3. Snow and Glacier Hydrology

It has, become necessary to analyze the quantity of snow melt in the high Himalayan region, as the water thus produced becomes available to the major rivers of the kingdom. Data pertaining to climate and water flow from the hydro-meteorological centres of the high Himalayan region will be collected and processed. This programme will be implemented at all centers of the high region of the Kingdom. For this modern technology like remote sensing and geographical information system will be used.

4. Wind and Solar Energy

As a large sum of money is required to supply electricity in the entire hilly region, it appears desirable to develop the access to energy by utilising of wind and solar energy. In order to provide support to the feasibility study to be conducted in this regard, there is a programme to collect data from four automatic instruments to be installed during this plan period for measuring wind and solar energy.

Details of Expenditure: A sum of Rs.117 Million is expected to be spent in programmes related to hydrology and meteorology to be implemented in the Eighth Plan period. Out of this Rs. 50.074 million is expected to be spent under capital expenditure and Rs. 66.926 million in administrative expenses. All the expenses related to this programme will be borne by His Majesty's Government. The details are as follows:

Rs. in Thousand

S.No.	Name of the Project	Total Project Expenditure
1.	Hydro-meteorological data management	71,258
2.	Water quality study'	10,080
3.	Forecast of water level	17,487
4.	Agro-climatologically zoning	2,415
5.	Snow and glacier hydrology	12,080
6.	Air pollution study	2,070
7.	Wind and solar energy	1,610
	Total	117,000

Appendix 1

Regionwise Physical Target of the Eighth Plan

S. N.	Programme	Eastern Region	Central Region	Western Region	Mid-western Region	Far-western Region	Total
1.	Installation of hydrological station	12	13	9	10	6	50
2.	Sediment and water quality study	4	5	4	4	3	20
3.	Installation of meteorological station (a)	5	-	-	-	-	5
4.	Installation of raingauge stations (b)	10	-	-	-	-	10
5.	Air pollution study	-	5(c)	-	-	-	5
6.	Snow melt quantitative study	2	1	1	2	-	6
7.	Wind and solar energy study	1(d)	-	2	1	-	4

The districts for Programmes shown in serial nos.1,2, and 6 can not be specified.

(a) Districts: Morang, Khotang, Bhojpur, Sankhuwasabha and Jhapa.

(b) Districts: Taplejung,-2nos -Morang, Panchthar, Solukhumbu-3nos.,Sirha, Terhathum,Ilam.

(c) Districts: Kathmandu.

(d) Districts: Solukhumbu, Mustang, Manang and Jumla.

Appendix 2

status of Hydro-Meteorology

S.No.	Programme	Status upto FY 1991/92
1.	Hydro-meteorological data management	
	(a) Hydrology	Water level and water flow data analyzed upon collection from 54 stations now data analyzed upon subsequent to the installation of hydrological stations at different rivers of the Kingdom,
	(b) Meteorology	(a) Meteorological stations Installed in the different parts of the kingdom of Nepal as follows:
		i) Raingauge siations - 253 Nos,
		ii) Agro-climatic stations -20 Nos.
		iii) Climatological stations - 66 Nos.
		iv) Synoptic stations - 14 Nos.
		(b) Initiation of weather forecasting:
2.	Water quality study	15 sediment sample collection centres established.
3.	Forecast of water level	Arrangements made to receive in Kathmandu real time water level during the rainy season from nine stations established in different rivers.
4.	Agro-climatological zoning	
5.	Snow and glacier hydrology	The installation of hydro-climatic stations in six places of the Himalayan region. Data collection processing and publication being done since 1987 subsequent to the installation of hydrological stations in the different river systems of the Kingdom of Nepal
6.	Air pollution study	
7.	Wind and solar energy	

Appendix 3

Glacier and Glaciological study sites

S.No.	Site	District	Type of Station
1.	Lotang River - Kyongjing, Lotang	Rasuwa	Hydrological, Semiautomatic
2.	Imja River - Dingboche, Khumbu	Solukhumbu	Hydrological, Semiautomatic
3.	Modi River - Machhapuchhre Base Camp - Bager, Annapurna	Parbat	Hydrological, Semiautomatic
4.	Barun River - Phematan Kharku - Shipton la Makalu - Tashi Village	Sankhuwasabha	Hydrological, Automatic, Semiautomatic
5.	Takche River - Takucha - aZang - Halji	Humla	Hydrological, Automatic, Semiautomatic
6.	Sanu Bheri - Hurikot - Maidan Plataeu	Dolpa	Semiautomatic, Automatic

Road and Other Transport

Introduction:

Physical infrastructures play an important role in the all round development of the country. The development of physical infrastructure not only accelerates the pace of economic growth of the country but also firmly supports the development of social and other sectors. Transport occupies the lead position among physical infrastructures because the development of other physical infrastructures such as communication and electricity also, depend upon it. The development of transport directly influences the development of both productive and social sectors, the former represented by agriculture, industry, commerce, etc. and the latter represented by education, health, etc. Taking this reality into consideration, special attention has been given to the development of the transport sector from the very beginning of the planned development.

Situation of the National Transport system:

The National Transportation system of Nepal has a blend of both the modern means of transportation such as roads and bridges, airways, ropeways and railways on one hand, and the traditional means of transport such as foot trails, mule tracks and service tracks (for ox-driven carts) and suspension bridges for pedestrians, cableways and twinways, on the other. There is, however, still a predominance of traditional means of transport in the national transport system. The traditional means-such as foot trails, mule tracks, service tracks and main tracks still link major parts of the kingdom. An estimated 20,000 km of foot trails and small mule tracks is believed to exist all over the country. These traditional means of transport have been meeting the transport requirements of the people in the remote and hill districts. Several means of the traditional transport system are in risky states because the twinways, cableways etc; used for crossing streams and rivulets in the main trails do not seem to meet the required safety standards. Main tracks used as foot trails and mule tracks are also often found to be quite narrow. Due to this, the mobility in the hill and remote areas is difficult especially during the rainy season. It has not been possible to make the traditional means of transport cost effective and efficient because of the compulsion to use porters, horses, mules, sheep, bullock carts etc. employed in the transport of goods.

A glance at the means of modern transport system reveals that the roads, bridges, and the airways occupy a prominent place in Nepal. These means so far constitute the main organs of the modern national transport system.

An analysis of the magnitude of passenger and goods transport services provided by the modern transport means clearly reveals the lead position occupied by the road transport. The role of this transportation means is definitely important in as much as taking passengers to their destinations and carrying goods are concerned. This is evident from the increasing contributions made by the modern means of road transport like buses and trucks as well as from the increasing road lengths and an ever increasing number of vehicles plying on these roads. The importance of road transport is proven by the number of vehicles registered as of FY 1991/92 which stands at 103,718. The breakdown of 101,841 vehicles registered as of June/July, 1992 by type is shown in Appendix - 1. As the means of road transport, make it possible to extend customer services to their very door steps, its importance is obviously increasing in comparison to other means of transport.

Progress during the Seventh Plan:

During, the Seventh Five Year Plan period (1985-1990) only 1169 km of roads were constructed which included 207 km black-topped, 659 km and gravelled and 303 km earthen against the respective target of 432 km, 734 km and 815 km. In this way, the achievement relative to the target was only 59 percent.

Achievement in highway construction likewise registered a dismal 47.3 percent (551 km against a target of 1,165 km). In feeder roads, 198 km out of the targeted 498 km was completed recording only 38.6 percent achievement. However, 181 km roads have been built including the roads constructed under Integrated Rural Development Projects against the targeted 128 km. within urban areas, a total of 245 km road was built as against the target of 190 km. Roads totaling 882 km were, built under district level programmes, constituting 103 km black topped, 236 km gravelled, and 543 km earthen roads. (The achievements of Seventh Plan are given in Appendix-2.)

As regards the construction of bridge's in the Seventh Plan period, only 15 bridges were completed as against a target of 23. Towards suspension bridges, 105 of them were built by the central agency (Suspension Bridge Division) as against the target of 373.

In addition, 41 bridges were built by the Remote Area Development Committee.

Progress in Fiscal Years 1990/91 and 1991/92:

The total length of the roads till the end of the Seventh Plan period was 7,330 km. By the end of FY 1990/91, this length reached 8,328 km with the addition of 504 km built during the interim period (1990/91). By 1991/92, the estimated road length in the kingdom reached 8,909 km with another addition of 581 km during that year (Appendices 3 and 4).

Existing Problems

A look at the achievements made in the road transport to date reveals that in spite of the initiation of the process to link various parts of the country with one another, a major portion of the country's territory remains isolated. An estimated 8,909 km roads have so far been constructed. The road travel from Mechi in the east to Mahakali in the west can now be accomplished from within the country. Work has also begun to link the Terai, Hills and the Himalayan region to one another with roads. As a result of the increased road transport facility, there has been an increase in production activities in some areas of the country. However, there still exist backlogs of national problems needing appropriate solution.

Major problems in the field of transport are as follows:

1. Existing transport system not being fully capable of linking most parts of the country with each other, it still takes a great deal of time to reach the mountainous and Himalayan regions from the Terai. It is for this reason that most of the areas of the kingdom are still not socially and economically integrated.
2. The reason for low traffic volume on the existing highways is due to road construction without sufficient prior technical and financial feasibility studies in the past. There are certain roads which are not completed as yet. The problem before the nation is how to make these roads economically viable.
3. The conditions of some of the highways are deteriorating in want of regular maintenance. Due to this very reason, even the roads in Kathmandu, the capital city, are worsening. Most of the roads have potholes and other deformities leading to an unexpected increase in the cost of vehicular movements. This persists as a national problem.
4. Modern transport system has not yet been effectively expanded to reach the rural areas. The development in transport has not even been able to uplift the rural people forced to live below poverty line. This sort of problem persists due to the inadequacy of farm to market link roads.
5. The reasons for under achievements of targets or delays in road construction are equipment shortage, cumbersome contract process, unavailability of construction materials in time, delays on the part of contractors, etc. The shortcomings in the project formulation and implementation processes also account for such delays.
6. The roads linking the cities with other important places are extremely long and in want of proper maintenance, the national transport costs are increasing through time. This factor, among others, has adversely affected the national balance of payment situation.
7. The environment is being adversely affected partly because due considerations were not given to the fragile mountain environment while constructing roads in the mountain and Himalayan Region. The development of road transport has thus caused environmental and pollution problems.
8. Together with road, airways, waterways, there are other ropeways, railways and conventional means of transport like trails and mule-tracks which also form the national transport system. It is, therefore, necessary to develop road transport system so as to integrate it with the total national system of transport. This type of integration is difficult without formulating a detailed master plan.

Background of the eighth Plan:

Although 8909 km roads have so far been built, 23 district headquarters are yet to be connected with the road links. There is still a great need for linking farms with market centres by roads in order to support the economy of the rural areas. It is no less urgent to facilitate the remote and the Himalayan regions with tracks, mule-tracks and the suspension bridges, because these places would probably need much time before road transport could be feasible. The road has great role in the development of infrastructures of others aspects, too. Road construction is also urgently needed for the development of sectors like electricity, industry, tourism and education.

In view of the above mentioned aspects, the Eighth Plan has accorded high priority to road construction in order to help achieve higher and sustained rate of economic growth, to help alleviate poverty and to help lessen regional imbalances.

Objectives:

Following are the specific objectives of the road transport development to be implemented during the Eighth Plan:

Policies:

1. To consolidate regional integration by linking various parts of the country in order to ensure high degree of interdependence among economically potential physiographic regions of the country.
2. To strike a balance in the development of various regions by supporting different programmes of national and economic importance related to tourism, agriculture, electricity, etc., in order to forge interlinkages between villages and the-market places.
3. To ensure favourable balance of payment by minimizing national transportation costs.

Policies:

Following policies will be adopted in the field of road transport to achieve the objectives listed above:

1. The main goal of this plan would be to develop a national transportation system with a view to making the means of transport like roads, bridges, main trails, ropeways, waterways and airways complementary to each other in interlinking various potential areas of the country towards their economic betterment. The prevailing road classification under national road transport system has been given in Appendix 5. A National transport Master Plan will be formulate_ to achieve the main goal stated above. The Master Plan will ease to identify the appropriate model to help the structural development of national transportation system in -the coming years. Due emphasis in the long term Master Plan will be given to the promotion of regional equity. In addition, special attention will be given to interlink national transportation systems with regional and international railways and highways. The National Transport Master Plan will cover a 20 year span in order to attain planned development of road network.
2. Emphasis will be given to the construction of bridges and culverts, and necessary improvements will be made in the main-tracks of Terai and the remote mountainous regions. Besides, rural transportation system will be expanded and made safer and more dependable by developing the modern twineways. and ropeways.
3. High priority will be given to the completion of the remaining portions of east-west and north-south highways.
4. Special priority will be given to the maintenance of existing highways of national and regional importance. A revolving fund will be created for this. In the same way, adequate financial provisions will be made in the regular budget for the regular maintenance of roads based on their maintenance status and length. In addition, certain portion of road-toll It will be allocated for exclusive road maintenance purpose.
5. Specific criteria will be developed to levy toll on the uses of roads and bridges to support their regular maintenance. Arrangement will be made to introduce toll taxes, and the revenue thus generated will be used exclusively for maintenance purposes.
6. Priority will be given to the construction of roads to link construction sites of various projects of national significance as has been done with the hydroelectric projects. The formulation and implementation of such road projects will be incorporated within the programme of the concerned agency as far as possible.
7. As the role of urban roads is important in the development and expansion of towns in the kingdom, the maintenance and standardization of urban roads will be undertaken together with the construction of additional roads under town development programmes.
8. Special emphasis will be given to the construction of link roads joining farms to market places or linking the agricultural production centres and the local market centres in the districts.' People's participation will be mobilized in the construction and the maintenance of such projects. Priorities will be given to those projects where greater degree of participation can be ensured. District Development Committees will be involved in the selection, formulation and the operation of these projects. Care will be taken to preserve environment from being adversely affected while constructing and expanding the roads. Environmental aspect of the project will be thoroughly evaluated prior to the implementation of road projects based on their respective nature.
9. Most areas in the country are still deprived of road facilities. Only 52 district headquarters in the kingdom are connected by the existing road network. Efforts will, therefore, be made to connect the hitherto unconnected districts by roads in a phased manner. Towards this end, construction will be initiated to provide minimum level of road facilities. Besides, simple construction methods will be adopted in the construction of north south roads to make them good enough for the dry seasons and with lesser vehicular congestion commensurate with the investment.
10. Emphasis will be given to the construction of bridges and the culverts over the Terai and mountain rivers which are often flooded in the rainy season causing transport inconveniences.

11. Improvements will be made on the existing system of construction and implementation contracts. Policy will be adopted to award a single contract, remaining within the limitations of the annual budget, for important and high priority projects of the current plan depending on three to five year's work volume instead of awarding annual contracts based on the annual budget.
12. Towards the rural transport, a policy of giving priority to the construction of mule-tracks in the Himalayan region, service tracks in the hilly regions and cart-tracks in the Terai region will be adopted.
13. Long term traffic projection, landslide situation, environmental situation and locally available technologies will be considered determining the technical standards of the roads and highways to be constructed particularly in the hilly region. Likewise, geo-physical and engineering technologies oriented towards solving the road construction problems in the mountains will be adopted by establishing mountain risk engineering and environment unit within the Department of Roads.
14. Considering the potential contribution of Royal Nepal Army in the development works, the army cadres will be mobilized in the construction of roads in the 'Eighth Plan.
15. Projects will be classified as central level and district level in order to attain maximum achievements in the construction of roads, bridges and other means of transport. The projects of national importance will be kept at the central level and those having more of a local importance will be centrally supported in the form of district level programmes and projects.
16. Separate guidelines for road and bridge standard, specification, contract document, contract method and work sequencing will be prepared for roads and bridges projects in the hills and Tarai with high and low traffic density as well as the district level road projects.
17. The activities like dense tree plantation on both sides of roads and the rivers as well as in the areas possessed by the government, possession of areas outside road limits prone to landslides, and the takeover of the areas considered as road limits, will be conducted in order to protect roads from landslides and soil erosion. Apart from the help from central agencies, people's participation will be mobilized with the involvement of the non-governmental agencies.
18. Primary survey and feasibility study will be done in order of priority determined by Road Network Master Plan prepared for the detailed survey design and the feasibility studies of roads and bridges for national and district level projects. But detailed survey and design works will only be conducted for those sections of the roads which fall in the yearly construction programme. This is with reference to the road projects which are uncertain and require much more time for completion.
19. A separate departmental level agency will be set up to more effectively construct and maintain the bridges, culverts, suspension bridges, cableways etc. meant to cross rivers and rivulets intersecting important foot trails, mule-tracks, and cart tracks.
20. An urban roads master plan will be prepared to develop the roads in important big and medium size cities and towns. Municipalities will be supported to enable them to maintain roads within their jurisdiction. Preference will be given to the construction of roads under town development programmes. But special attention will be given to the construction of footpaths, bicycle lanes, zebra crossings, overbridges, bus-stops and subways at appropriate points, to ensure the safety of the pedestrians while building roads in the urban areas.
21. Care will be taken about petrol pumps, vehicular maintenance, telephone, and other roadside facilities in both existing highways and those to be constructed in the future.
22. In order to make the role of private sector more effective in the construction of roads and bridges, necessary improvements will be made in the existing rules and regulations. Methods like the "Build-Own-Operate-Transfer" will be practised to attract national and foreign investors for the purpose of mobilizing private sector investment for the construction of short distance tunnel roads and bridges, on the basis of economic feasibility studies, in those areas which already have road facilities. Special incentives will also be arranged, if necessary, by initiating appropriate mechanism for it.
23. Emphasis will be given to the development of domestic construction industries to ensure timely and prompt completion of the constructions of roads, bridges and other means of transport. Necessary steps will be taken to create conducive atmosphere to enable the Nepalese contractors related to construction industries and the construction companies in Nepal to enter into competitive bidding in construction projects of international standard.
24. Priority will be given to the mountainous and Himalayan regions for the construction of suspension bridges.

25. An equipment maintenance and operation unit will be established to operate and maintain the road construction and maintenance equipment.

Priorities:

Following priority order has been determined in the development of road transport in the Eighth Plan:

1. Remaining portions of East-West and North-South Highways and other on-going projects,
2. Roads to link those districts which have not been linked so far,
3. Maintenance and reconstruction of highways and other important road projects in operation.
4. Roads to support large and medium size hydro-electric projects,
5. Roads projects like Sindhuli-Banepa with enhanced economic viability and significant potential for economic development,
6. Rural transportation development projects like farm to market roads, improvements of main trails including foot tracks, mule tracks, main through-fares and the suspension bridges which directly benefit the rural areas.

Major Programmes:

Following programmes will be undertaken to attain the desired objectives and targets:

- A. Programmes on rehabilitation, periodic maintenance and reconstruction of roads (including those damaged),
- B. Programmes on the construction and upgrading of roads and bridges,
- c. Programmes on rural transportation development.
- D. Miscellaneous programmes.

Together with the completion of the above programmes, the Eighth Plan envisages to construct 2,978 km road (1,778 km and 1,200 km of roads at central and district levels respectively) within the plan period. In addition, 1083 kilometres of highways and the feeder roads will be rehabilitated, and the damaged sections of 1475 km of other loads will be repaired. Similarly, 48 km of damaged roads will be reconstructed during the plan period.

There is a target of constructing 830 and 125 km. of mule tracks and tractor tracks respectively as they are important means of rural transportation. In addition, 500 suspension bridges and 25 motorable bridges are targeted to be built in various parts of the country.

An additional 14 districts will be linked with motorable roads within the Eighth Plan period.

A. Programmes on the Rehabilitation, Periodic Maintenance and Reconstruction of Roads

Three major activities will be undertaken in this programme namely i) consolidation, ii) timely maintenance, and iii) reconstruction of Roads. This programme will help in minimising national -transportation cost consequently relieving-the budget deficit situation.

1. Rehabilitation of Roads The standard of highways and the feeder roads will be decided on the basis of the traffic density on these roads. Rehabilitation works will be initiated to enable 1,083 km roads to bear increased traffic loads. Following projects will be rehabilitated within the plan period:

Table 1

Highway and Feeder Roads Rehabilitation Programmes During the Eighth Plan 1992-1997

Project Title	Physical Target (In Kilometers)
Highways	
A. East-West Highway	
1. Kakarbhatta-Kamala	237
2. Kamala-Pathlaiya	136
B: North-South Highway	
1. Jogbani-Dharan and Dhankuta-Basantpur	85
2. Birgunj-Hetauda	46
3. Charali-Ilam* (Mechi Highway)	76
4. M.R.M-Gaighat* (Sagarmatha Highway)	7

5. Godavari-Bhatkanda* (Dhangadi-Darchula Highway)	101
6. Bhatkanda-patan** (Dhangadi-Darchula Highway)	59
7. Tulsipur-Salyan** (Rapti Highway)	62
C. Mid Hills East-West Highway	
1. Prithvi Highway***	30
2. Bhatkanda-Doti*	74
Feeder Roads	
1. M.R.M. (Lamahi) - Tulsipur*	47
2. Dumre-Beshishahar**	40
3. M.R.M. (Bardlwas)-Sindhuli**	37
4. Lumbini_Taulihawa*	22
5. Nepalgunj-Gularia*	24
Total	1083

Notes:

* Rehabilitation to include standard up-grading with black-topping.

** Rehabilitation with gravelled standard upgrading.

*** Included in this are road sections in Naubise Mugling and Mugling-Marsyangdi Hydro-Electricity project site.

2. Periodic Maintenance and Reconstruction Programme

This programme has been included, with special priority to repair and reconstruct the currently serviceable highways, feeder roads and other roads considering the present road-condition of the kingdom with a view minimize the costs of transport services. During the Five Year Plan period, a total of 1,475 km roads will be repaired or reconstructed in a time bound form under various programmes presented in Table 2 below:

Table 2

Periodic Repair and Maintenance of Roads During the Eighth Plan 1992-1997

Project Title	Physical Target (In Kilometers)
Highways	
1. Hetauda_Narayanghat Road	78
2. Trivuan Highway (Hetauda-Naubise)	107
3. Naubise-Thankot Road	17
4. Thakot-Kathmandu Road	9
5. Kathmandu-Banepa Road	20
6. Kathmandu-Kodari Road	94
7. Mugling-Narayanghat Road	36
8. East-West Highway (Butwal-Dhanu Khola Portion)	88
9. Prithwi Highway (Mugling-Pokhara Portion)	90
10. Siddhartha Highway (Pokhara-Butwal-Bhairahawa Sunauli)	180
11. East-West Highway (DhanuKhola-Kohalpur Part)	151
12. Nepalgunj-Kohalpur Road	20
Feeder Roads	
1. Dhalkebar-Janakpur-Bhittamod Road	9
2. Kathmandu-Godawari Road	15
3. Kathmandu-Dakshinkali Road	20
4. Kathmandu-Kakani Road	48
5. Kakani-Trishuli Road	105

6. Trishuli-Dhunche-Somdang Road	110
7. Lamosangu-Jiri Road	20
8. Malekhu-Dhading Road	57
9. M.f.M. (Gorushinge) Pattharkot-Sandhikhgrka*	75
10. Tansen-Ridi-Tamghas*	56
11. Bhairahawa-Parasi*	27
12. Ring Road (Kathmandu)	1475

* Besides periodic repair and maintenance, upgrading to be done on the basis of feasibility study.

3. Reconstruction of Damaged Roads

This programme has been included to re-construct roads and bridges damaged by landslides, floods etc. During the Plan period, 48 km of such roads as identified in Table 3 below will be reconstructed.

Table 3
Reconstruction of Damaged Roads During the Eighth Plan Period 1992-1997

S.No.	Project Title	Physical target (In Kilometers)
1.	Thankot-Naubise	22
2.	Arniko Highway	26

Note: River-training works at various sectors of East-West Highway will also be done under this programme. Constructions of damaged bridges are included under the motorable bridge programme.

B. Road Construction and Upgrading Programme

Road Construction Programme (Central Level): -To cater to the increasing demand of road transports, programmes have been prepared for the construction of additional roads and upgrading the standards of others. The roads to be constructed under this programme are expected to fulfill the objective of ensuring regional integration and complementarities. .

1. Highway Construction

A total of 763 km highways are targetted to be built by implementing various programmes during the Plan period. Of the target, 48 km black-topped, 149 km gravelled and 566 km earthen motorable roads will be built. Kohalpur-Mahakali portion, an important portion of the East-West Highway, will be completed with highest priority.

Besides the above mentioned highways, feasibility studies will be conducted for the construction of short distance links, like the Hetauda-Kathmandu freeway tunnel, under the principles of Build-Own-Operate-Transfer by involving the private sector. Specific details on this are presented in Table 4 below:

Table 4
Physical Targets of Highway Construction During the Eighth Plan 1992-97

(In Kilometers)

S.No.	Project Title	Total Length	Blac-ktopped	Gravelled	Motorable	Total
1.	East-West Highway					
1.1	Kohalpur-Mahakali					
	Karnali-Mahakali	40	10	-	-	10
1.2	East-West Highway in the mid-hills					
	Basantpur-Tehrathum	26	-	-	16	16
	Pokhara-Baglung	73	38	-	-	38
1.3	North-South Highway					

1.3.1	Mechi Highway					
	Phidim-Taplejung	86	-	35	-	35
1.3.2	Koshi Highway					
	Hile-Khandbari					
	Hile-Khadbari-Noom (Arun approach road)	149	-	-	149	149
1.3.3	Saqarmatha Highway					
	Gaighat-Diktel	83	-	-	83	83
	Katari-Okhaldhunga- Solu					
	Katari-Okhaldhunga	76	-	-	76	76
1.3.4	Rapti Highway					
	Salyan-Musikot	107	-	-	101	101
1.3.5	Karnali Highway					
	Surkhet-Jumla	215	-	-	60	60
1.3.6	Dhanqadhi-Darchula					
	Patan-Baitadi	36	-	36	-	36
	Baitadi-Darchula	121	-	-	81	81
1.4	Other Highways					
1.4.1	Sindhuli-Banepa	118	-	78	-	-78
	Total		48	149	566	763

2. Feeder Roads Construction

A total of 915 km feeder roads will be constructed during the Eighth Plan period, which includes 89 km black-topped, 205 km gravelled, and 621 km earthen roads.

The feeder roads to be constructed during the Eighth Plan period are classified into 3 sub-titles, a) feeder roads on highways, b) approach roads to hydroelectric projects and c) other roads that will support various economic sectors.

A. Feeder Roads to Highways

In accordance with the policy of making the already existing highways, and also those under construction, more potential from economic point of view by building feeder roads, 8 feeder road projects will be implemented under the Highway feeder roads construction programme. The physical targets of the projects under this programme are as given in the table below:

Table 5
Physical Targets of Construction of Highway Feeder Roads
During the Eighth Plan 1.992-97

(In Kilometers)

	Project Name	Total Length	Blacktopped	Gravelled	Motorable	Total
1.	Baglung-Beni-Tatopani	23	-	-	20	20
2.	Chhinchu-Jajarkot	92	-	-	61	61
3.	Khodpe-Bajhang	99	-	-	84	84
4.	Mahendranagar (Daiji)- Brudar-Jogbudha	66	-	-	30	30
5.	Sahajpur-Dipayal	110	-	-	99	99

6.	Prithvi Highway (Galchhi)-Devighat(Trishuli)	18	-	18	-	18
7.	Baitadi-Jhulaghat	20	-	-	16	.1,6
8.	Dailekh Roqd*	-	-	-	26	26
	Total	-	-	18	336	354

* Surkhet-Dailekh or Tallo Dhungeshwor-Dailekh constructed after their comparative study.

B. Roads to Support Important Development Programmes

This programme has been included with a view to constructing roads found necessary for the implementation of various programmes that are related to the hydroelectric and other economic sectors that aim at speedy economic development of the country.

Road transport facilities are very important to run the hydroelectric projects. In the absence of these facilities, implementation of large and medium scale hydroelectric projects is impossible. Therefore, Arun III access road, Khimti road, Kali Gandaki access road, Patan (Baitadi) - Pancheshwor, and Bhaluwang-Devisthgn (Pyuthan) roads are to be constructed for the power projects like Arun III, Khimti, Kali Gandaki, Pancheshwor, Jhimruck, respectively. These roads are targetted to be built up to feeder road standards. The physical targets of projects related to various economic sectors, are as given in the table below:

Table 6

Physical Targets of Roads projects to support Important Development Programmes During the Eighth Plan Period, 1992-1997

(In Kilometres)

Project Name	Gravelled	Length	Black-topped	Eart-hen	Tota l
A. Roads for Hydroelectric Projects					
1. Khimti Road	27	-	27	-	27
2. Kali Gandaki Road	30	-	-	30	30
3. Bhalubang-Devisthan (Pyuthan)	44	-	37	-	37
4. patan-pancheswor	60	-	-	60	60
5. West Seti Road	25	-	-	25	25
Total			64	115	179
B. Roads for Tourism Development					
1. Panchkhal-Helambu	65	-	-	40	40
c. Other Feeder Roads					
1. Bhojpur Road	80	-	-	72	72
2. Biratnagar-Rangeli Ratwa	38	38	-	-	38
3. Chatara-Chakraghatti Birpur	51	51	-	-	51
4. Sindhuli (Khurkot)-Manthali (Ramechap)	18	-	-	18	18
5. Chhahare-Tokha	25	-	20	-	20
6. Besishahar-Chame	75	-	-	10	10
7. Ghorahi-Holleri (Dhang)	28	-	28	-	28
8. Doti (Silgadhi)-Safebagar-Mangalasen	75	-	75	-	75
9. Paripatle-Kagate	6	-	-	6	6
10. Nepalgunj-Baghauda	50	-	-	24	24

Total		89	123	130	342
Total (A+B+C)		89	187	285	561

3. Urban Roads Construction

Urban Road construction and repair works programme is included to manage the increasing urbanization and develop' and expand the roads to meet the increasing traffic pressure in' cities like Kathmandu, Laitpur, Biratnagar, Birgunj etc., and involve the municipalities in the task.

Kathmandu is being polluted due to its uncontrolled expansion. In order to reduce the river pollution and prevent adverse environment conditions that may result, roads along the riversides will be expanded and improved. Also during the Eighth Plan Period, stepwise programmes will be implemented following necessary studies on the extent of urbanization and the road-situation in Kathmandu Valley. Bishnumati Link Road will be constructed to reduce the problems raised by the increasing traffic pressure in core areas' of Kathmandu city.

During the Eighth Plan period. 100 km urban road will be built including 50 km black-topped 25 km gravelled and 25 km earthen besides the repair and reconstruction of other urban roads.

4. Farm to Market Road and District Road Construction (District Level)

It is necessary to render various existing highways and feeder roads, and those under construction economically viable. Therefore, it is proposed to construct farm to market roads and district roads network to support agricultural production in the areas where roads exist and where they will be constructed in the near future. These roads will be constructed with minimum investment soliciting the people's participation with a view to fulfilling the local necessities. In the same way these roads will be built in the hilly regions as dry-season-roads and in the Terai regions as fair weather-roads by constructing low cost bridges and culverts.

A total of 1,200 _m additional roads (480 km in the hills and 720 km in the Terai) will be built under this programme. These roads will be generally built in the form of earthen and gravelled roads. These roads will gradually be black-topped and gravelled on the basis of their economic importance. Besides, the proposed roads projects listed in appendix 6 will be gradually implemented after review!lg their techno-) economic feasibilities and on the basis of resource availability.

The purpose of regional balance will be achieved by this programme since it will support the development of rural areas. In addition, the proposed farm to market links will make the highways and other roads economically viable as per the policy.

5. Construction of Motorable Bridges

Altogether 25 bridges will be constructed on the basis of feasibility studies. The bridges to be constructed within the plan period will be Trishuli Bridge (Dhading), Tilawe Bridge (Parsa), Sirsia Bridge (Raxaul-Birgunj Parsa), Devinia Bridge (Jhapa), Babai Bridge (Amelia-Tulsipur,Dang), 3 bridges on MRM Gaighat Road, 4 bridges on Kathmandu roads, seti Bridge (Kaski),Vijaypur Khola Bridge (Kaski), Rapti Sidhania Bridge (Banke), Daduwa River Bridge (Banke), and Sali River Bridge (Kanchanpur). In the same way feasibility studies and surveys of other bridges will be undertaken as required.

Rural Transportation Development Programme

Nepal's economy is still dependent on the rural areas where majority of people live. sustainable economic development in the country would be difficult to achieve if rural areas are not properly developed. But the development of villages is presently hindered by the, lack of transport facilities. The limited available resources available do not possibly allow road construction in each and every village. In view of the required size of investment, it would take a long time to link every village with the roads. The normal movement of the common rural people will be comfortable and safe if the conventional means of transport like foot-trails, mule-tracks, service tracks, suspension bridges, cableways and twineways used for crossing the rivers or rivulets are improved. Keeping this policy in mind, due emphasis is given to the rural transportation development programme under which these conventional means of transport will be developed and improved. The suspension bridges on the main trails will be built as central level projects while the remaining bridges will be built under district level programmes.

1. Construction and Improvement of Foot Trails, Mule Tracks and Service Tracks

Construction and improvement of 830 km of tracks, mule tracks existing as main trails at the local level will be undertaken during the Eighth Plan period and an additional 125 km service tracks will also be constructed during the said period.

2. Construction and Improvement of Suspension Bridges

The suspension bridges have always had a leading place as a means of transport especially in the rural hilly regions. Therefore, in order to facilitate the movements of the rural people with comfort and safety, emphasis will be given to the construction of suspension bridges in the Eighth Plan period. High technology suspension bridges on the nationally important main trails will be constructed as central level projects. The suspension bridges-lying on the local tracks which may be built at low cost through local technologies will be constructed at district levels.

The target is to build 500 suspension bridges in the kingdom during the Eighth Plan period of which 100 will be on the rivers falling in the main trails.

3. Construction and Improvement of Twineways and cableways

The need for bridges is evident for the rural Nepalese people who stay in scattered settlements and who often have to cross rivers and rivulets in the course of regular movements from house to farms and other places. It is, however, not possible to construct suspension bridges with high technology due to resource limitations. Modern cableways and twineways (rope bridges) will, therefore, be built in different areas depending on the traffic density to be revealed by survey studies.

Within the Eighth Plan period, 100 such twineways and cableways are targeted to be built and repaired in different parts of the kingdom.

Miscellaneous

1. study Research and Survey

Studies will be conducted to support the construction, expansion and improvement of roads and bridges. These include feasibility studies, detailed survey, traffic engineering and environmental studies. The road projects to be studied during the Eighth Plan period are given in Appendix-6.

2. Road Laboratory

In order to maintain quality in the construction of roads, it is necessary to test the soil, and the construction equipment to be used for the purpose. Therefore, road laboratories will be strengthened and equipped with required facilities.

3. Availability of Construction Materials, Equipment and Spare Parts

Construction materials, equipment and the spare parts are needed during the road construction. Department of Roads is not only inadequately equipped with such facilities but also the available equipment lay idle due to lack of spare parts. The need for construction materials and equipment is felt in order to timely complete the construction works in district level projects maintaining sufficient quality. It is, therefore, proposed to make the construction machinery and equipment like bull-dozers, graders, road rollers, trippers, trucks and the spare parts available for district level road construction works involving the participation of the people.

4. Development of organizational support Services

Provisions for physical and other support services for the road development works have been made including the construction of a new office building for the Department of Roads as the available space has become too inadequate. Likewise, a workshop will be established for the purpose of repairing the road construction machinery and equipment.

5. Incomplete Projects

The incomplete construction projects started in the past years will, be completed.

Implementation Arrangements

The arrangements for implementing the roads and bridges projects have been made at the central and district levels based on their respective importances. District and Village Development Committees, Users' Committees, and other local agencies will be actively involved in the district level roads development activities. Likewise, the private sector will also be involved in the construction of roads. Royal Nepalese Army will also be involved in it. In the same way, a regular process of programme review, work evaluation and monitoring will be conducted for the works to be done under central and district level programmes.

Details of Expenditure

The implementation of the above programmes is estimated to cost a total of Rs. 12,329 million the allocation of which will be as given in Table 7 below:

Table 7
Proposed Expenditure for the Eighth Plan 1992-97

S. No.	Project Titles	Amount of Expenditure in (Rs.in million)	Total Expenditure in Percentage
1.	Periodic Maintenance. Reconstruction and the Rehabilitation of Highways	3941	31.96
A	Roads Rehabilitation	2325.6	18.86
B	Periodic Repair, Maintenance	1298.5	10.53
C	Damage Reconstruction	316.9	2.57
2.	Construction of Roads	6.534	53.00
A.	Highway Construction	2596.5	21.06
B.	Construction of Feeder Roads	2230.0	18.09
C.	Farm-Market Link Roads	1507.5	12.23
D.	Urban Roads	200.0	1.62
3.	Bridge Construction	476	3.86
4.	Development of Rural Transport	1058	8.58
5.	Miscellaneous	320	2.60
	Grand Total	12329	100.00

Expected sourcewise decomposition of the expenses will be as follows:

S. No.	Source of Expenses	Amount in (Rs.in million)	Percentage
1.	HMG	7872.8	63.86
2.	Foreign Aid	4456.2	16.14
	Grand Total	12329.0	100.00

other Means of Transport:

Introduction

Development of other means of transport is necessary for mountainous country like Nepal, where transport facilities in all areas of the Kingdom cannot be provided by roads. other means of transport to be operated basically by electricity, .like railways, ropeways, waterways could be developed as supplements to the road transport. This way, the national transport cost can be reduced considerably. Due attention, therefore, has been given to the development of these transport means as it will benefit the whole economy.

Progress during the Seventh Plan

Under the programme of construction, expansion and rehabilitation of the ropeways, the preliminary and rehabilitation studies were undertaken to meet the set target of extending the existing Kathmandu-Hetauda Ropeway facility up to Amlekhgunj. In addition, a study has been done to assess the feasibility of Khaireni-Manakamana cable-car service.

Towards railway rehabilitation and study activities, the study on rehabilitation works of Janakpur-Jayanagar and reconstruction of Raxaul-Amlekhgunj railways have been completed. Regarding expansion and study of Trolley-Bus services, works of Tripureshwor-Shahidgate; Teenkune (Koteswor) - Chabahil and Thapathali-Patan could not be initiated as targetted. In the same way, the master plan for the development of trolley-bus could not be started. But the studies regarding the Operation of Trolley-buses at Biratnagar-Dharan, Bhairahawa-Butwal and Suryabinayak-Banepa sectors are already completed. With regard to the study of bus terminals of long distance bus services under public transport services, the studies for the development of bus-terminals in Kakarbhitta, Biratnagar, Birgunj, Bhairahawa, and Nepalgunj have been done in addition to the one in Kathmandu. Studies on Multi-Model containerization have been completed as targetted regarding containerized transport system.

Operation of IJJet" !artz"II test survey has been completed as targetted under the study programme in order to see the possibility of developing waterways in the important rivers like Koshi and Narayani, whereas preliminary surveys have been conducted in Karnali, Seti, Bheri,saptakoshi, Sunkoshi, Arun, Tamor and Dudhkoshi. But works could not be initiated with respect to studies of the development of modern boat-technology *in* order to support the private sector in this activity.

Existing Problems

The progress scenario of the other means of transport during the Seventh Plan is not in any way satisfactory. The works in the areas of water-ways and trolley-bus services seem to have been limited to only studies. No

noteworthy improvement is observed in the fields of railways and ropeways. The railways and ropeways should not operate to their capacity mainly due to the lack of proper and regular repair and maintenance. In the same way, trolley-bus facilities could not be expanded due to the lack of adequate financial resources with Nepal Transport Corporation, and the non-availability of external resources in time. Transport costs could not be reduced 'in the foreign trade sector in a notable manner. Traffic as well as pollution has been increasing in the urban areas, but a substantial solution to this problem is yet to emerge.

Background of the Eighth Plan

Impressive achievements have been made in road and air transport in the past. The progress in other sectors of transport has not been as satisfactory. In considering the fuel needs for the operation of the other means of transport like waterways, ropeways" railways and trolley buses, the water transport system needs only small amount of fuel, whereas railways, ropeways and trolley-buses can be conducted by electric power. This can reduce the country's reliance on petroleum products. Viewed from environmental point of view, they will create the least water, air and sound pollution with regard to initial investment and operation expenses, railways, trolley-buses and the ropeways are quite costly. The contributions made by these means of transport in the total system are, however; very important.

It has become necessary to have dependable and efficient system of transport from Calcutta to Nepal, since Calcutta is the nearest sea port for the export and import of goods to and from Nepal.

In this context, it would be a great achievement if the railways reaching Nepalese border are turned into broad-gauge with the assistance of India. Since containerized transport is safest and most effective, it is necessary to work for its development. In the face of the developed countries moving towards producing things in time when needed rather than stocking the products for long, if our export products are not safely transported in time the importing nations may not accept them. Therefore, it is needed to adopt a multi-model transport operation system for door to door delivery of goods. This will immensely help exports and also reduce import customs. It is on this background that the objectives, policies and programmes relating to the development and expansion of this sector have been formulated.

Objectives

1. To keep the transit system of the kingdom simple and well organised and operates it in an effective manner.
2. To develop the ropeways, railways, water-ways and the trolley buses in a systematic manner,
3. To develop the public transport in a way to minimize the environmental pollution.

Policies

1. To continue efforts to link the Nepalese border customs with broad gauged Indian Railway.
2. To develop the containerized transport system in order to ensure the safety, effectiveness and cost efficiency of the foreign trade.
3. To establish and expand the transport system to be operated by locally available electric power in order to reduce the consumption of imported petroleum fuel.
4. To continue working towards the development of waterways on the important rivers, if technically feasible.
5. To explore the possibility of linking the internal waterways with Indian waterways and develop it in that line to the national benefit.
6. Public transport services to be made more comfortable, safe and regular. Necessary organizational improvements to be made in this regard.
7. To encourage the transport industries which support the promotion of national transport services and to create an environment favourable to the investment for manufacturing the bodies of buses or trucks, tyres, tubes, etc. domestically.
8. Containerized transport services, important for foreign trade and transit to be made safer and more dependable.
9. Regarding internal waterways development, boats suited to the national context will be used, and to explore the possibilities to link these to external waterways.
10. To consolidate the existing railways, ropeways and the trolley buses and be operate them in full capacity.
11. To encourage the private sector in the development of short distance rope-ways for tourism development and to mobilise public participation in the development of gravity ropeways.

12. To extend Trolley-bus services to reduce air pollution by the public transport services.
13. To attract private and foreign investors in organizing driving schools and workshops for repairs and maintenance and to effect necessary reforms in rules and regulations to systematically operate the public transport services.
14. To privatise and further activate Nepal Transport Corporation by involving it in foreign trade and transit systems in the changed economic context.
15. To initiate an institutional system' in connection with the control and inspection of the means of transport in order to reduce the air pollution to the least by the public transport and other services being operated in big or medium sized cities. Agencies related to it will be made effective.

Programmes

In accordance with the objectives detailed in the Eighth Plan, the projects related to the development of other means of transport will be as follows:

A. Development of Ropeways

From Fifth Plan onwards, all plans have emphasized towards improving and consolidating the' ropeways operated under Nepal Transport Corporation, and to standardize its services. During the Eighth Plan period, transportation activities will be made simpler, easier and more effective, and this will be possible only by extending ropeway transport in the mountainous regions like Surkhet-Jumla by consolidating Hetauda-Kathmandu ropeway. In addition, experimental programme of gravity ropeway will be undertaken after due studies.

B. Railways

As for railways, the Jayanagar-Janakpur-Bijalpura railway is operated by Nepal Transport Corporation though its consolidation has begun right from the Fifth Plan, it still remains in a very delicate condition. Therefore, the current plan emphasizes on its consolidation to render it safer, more reliable and more service oriented. In addition, the feasibility studies will be conducted with regard to metre-gauged railway lines in the sectors of Bhairahawa-Butwal and Jayanagar-Janakpur-Bardibas. RaxaulBirgunj railway, which is highly significant from transportation point of view, will be constructed by upgrading it to broad-gauge.

C. Development of Trolley Bus Services

The trolley bus service, operated with electric power, was initiated in the fiscal year 1975/76. The 13 km.long Bhaktapur-Kathmandu trolley bus system, operated from the Fifth Plan, has been offering its services. With a view to minimize the imported fuel consumption, trolley bus services will be extended to Tripureshwor-Kirtipur and Thappthali-Patan Gate-pulchowk during the Eighth Plan period.

Important contribution will be made to reduce the'pressu_e of vehicles in the urban roads, if trolly buses are operated throughout Ring Road of Kathmandu. Therefore, a 15 km. trolley- bus service will be operated in Teenkune-Chabahil-Maharajgunj sector. In addition, to facilitate the people of Itahari and other commuters, a.22 km trolley bus service will be implemented between Itahari and Biratnagar.

D. Internal waterways

If the perennially flowing rivers are used for the operation of waterways, the cost of transportation of goods, will be reduced considerably. Detailed engineering survey will, therefore, be done to prepare elaborate profiles of such rivers. Appropriate means of transport to be employed in the waterways transport will also be identified. Within the Eighth Plan period, the profiles of 187 km. long Ramdighat-Narayanghat-Bhaisalotan waterways will be prepared and appropriate means of transportation will be identified.Likewise, factual profile and.situation of waterways will be identified in the Gandak river stretch of Bhaisolotan down to the river Ganga. Services will be operated in the areas seen feasible.

E. Containerized Transportation System.

In accordance with the trade and transit agreement between Nepal and India, the goods imported from the third countries would reach Raxaul, Nepal, and then to different places of the kingdom. With an aim to simplify this, and also to conduct it in a systematic manner, import and export of goods will be made through, containers by operating Multi-Model containerization programme within the Eighth Five Year Plan period. The infrastructural development for this programme will be, implemented within this plan period.

F. Traffic 'Pollution control system

Urban environment is being increasingly polluted by different kinds of pollutants originating ,from various means of transport. Therefore, various traffic pollution control works will be launched by making Transport Management Department capable of controlling traffic pollution in the bigger cities like Kathmandu and others.

Details of Expenditure

It is proposed to spend Rs. 1,235 million in programmes and projects related to the development of various other means of transport. The distribution of expenses is as given below:

Table 8
Proposed Expenditure in the Fields of Other Transportation
in the Eighth Plan (1992-97)

Programmes	Amount of Expenses (Rs. in million)
A. Development of Ropeways 158	158
1. Feasibility study and Survey	3
2. Construction and Consolidation	155
B. Development of Railways	125
1. Feasibility Study and Survey	5
2. Construction and Consolidation	120
C. Internal Waterways	10
D. Development of Trolley Bus Services	437
E. Development of Containerized Transport System	500
F. Traffic Pollution Control System	5
Total	1235

The amount to be borne by HMG and the external agencies out of the above will be as follows:

Source of Expenses	Amount in (Rs. in million)	Percentage
HMG	247	20.00
Foreign Aid	988	80.00
Grand Total	1235	100.00

Appendix 1

Present status of Vehicles in Nepal by Types (March/April, 1992)

	Names of Vehicles	Number	Used for Hire	Percent Hired Out
1.	Bus	3,283	2,902	88.39
2.	Mini Bus	1,888	1,360	72.03
3.	Truck, Tractor, Lorry and Mini-Truck	9,591	6,335	66.05
4.	Car, Jeep, Van, Pick-up, Land Rover	26,547	3,983	15.00
5.	Tempo (Three Wheeler)	4,735	3,991	84.29
6.	Motor-bike, Scooter, Suncycle	44,854	-	-
7.	Tractor, Powertiller	7,545	1,927	25.54
8.	Bulldozer, Dozer, Grader, Crane, Dumper, Loader	128	-	-
9.	Rikshaw, Pushcart, Tanga	16,999	16,539	97.29
	Grand Total	1,15,570	37,037	32.05

Source: Department of Transport Management, Ministry of Works and Transport.

Note: Vehicles registered under Foreign Missions and UNDP are not included above.

Appendix 2
Physical Target and Progress of Road Transport in
Seventh Plan (1985-1990)

	Classification of Roads	Target	Progress	Percent Achievement
A.	Highways	<u>1165</u>	<u>551</u>	47.30
1.	Black Topped	344	26	7.56
2.	Gravelled	274	345	125.91
3.	Earthen	547	180	32.91
B.	Feeder Roads	<u>498</u>	<u>192</u>	38.55
1.	Black Topped	8	0	
2.	Gravelled	310	142	45.81
3.	Earthen	180	50	27.78
C.	Roads under IRDP and Cash Crops Development Programmes	<u>128</u>	<u>74</u>	57.81
1.	Black Topped	-	-	-
2.	Gravelled	70	57	81.42
3.	Earthen	58	17	29.31
D.	Main Urban Roads	<u>190</u>	<u>245</u>	128.95
1.	Black Topped	80	140	175
2.	Gravelled	80	85	106.25
3.	Earthen	30	20	66.67
E.	other Roads	-	<u>107</u>	∴
1.	Black Topped	-	41	
2.	Gravelled	-	30	-
3.	Earthen	-	36	-
F.	Total	<u>1981</u>	<u>1169</u>	<u>59.01</u>
1.	Black Topped	432	207	47.92
2.	Gravelled	734	659	89.78
3.	Earthen	815	303	37.18
	Total Construction under District Level Programmes	-	<u>882</u>	-
1.	Black Topped	-	103	
2.	Gravelled	-	236	
3.	Earthen	543		

Source: Department of Roads, Ministry of Works and Transport.

Appendix 3
Road Development in Nepal, 1956-1992

(km.)

Type of Roads Estimated*	FY 1956/57	FY 1969/70	FY 1974/75	FY 1979/80	FY 1984/85	FY 1989/90	FY 1990/91	FY 1991/92 Additional
Black Topped	137	821	1549	2044	2724	2958	3083	107
Gravelled	122	435	667	564	918	1658	2181	103
Earthen	365	1474	957	2332	2283	2714	3064	371
Total	624	2730	3173	4940	5925	7330	8328	581

Source: Department of Roads, Ministry of works and Transport.

* Estimated Progress as of FY 1991/92.

Appendix

4 Regionwise Development of Roads in Different Plan Periods (1956-1991)

(Km.)

Development Region and Road Category	1st Plan 1956-61	3rd Plan 1965-1970	5th Plan 1975-1980	7th Plan 1980-87	Interim Period 1990-91 - 1 Year
A. Eastern		<u>705</u>	<u>1052</u>	<u>1789</u>	<u>1951</u>
1. Black Topped	-	63	447	611	615
2. Gravelled	-	184	140	461	604
3. Earthen	48	458	465	717	732
B. Central	<u>450</u>	<u>1162</u>	<u>1905</u>	<u>2715</u>	<u>3181</u>
1. Black Topped	137/	515	887	1334	1323
2. Gravelled	116	228	291	674	844
3. Earthen	197	419	727	707	1014
C. Western	<u>120</u>	<u>493</u>	<u>946</u>	<u>1431</u>	<u>1572</u>
1. Black Topped		237	607	711	754
2. Gravelled			39	227	249
3. Earthen	120	256	300	493	569
D. Mid-Western	<u>6</u>	<u>370</u>	<u>1037*</u>	<u>826</u>	<u>901</u>
1. Black Topped		6	103	231	245
2. Gravelled		23	94	209	307
3. Earth Works	6	341	840	386	349
E. Far Western				<u>569</u>	<u>723</u>
1. Black Topped				71	146
2. Gravelled				87	177
3. Earthen				411	400
Grand Total	624	2730	4940	7330	8328

Source: Department of Roads, Ministry of Works and Transport. .

1. Additional 504 km. roads constructed in the fiscal year 1990/91 and those constructed before that year, but not included in the road statistics are also incorporated.

Note: * Also inclusive of the figures of Far Western Development Region.

Appendix 5

Classification of Roads

All the roads that come under the national road transport system are broadly classified as motorable and non-motorable, as defined in the past plans. They are (i) motor-ways and (ii) mule-tracks or foot trails. The motorable roads are further classified as national level and district level ones. The national level roads consist mainly of three categories, namely (i) highways, (ii) feeder roads, and (iii) main urban roads. These national level roads will be constructed at central level. The district level roads will be built at local level or district level with technical guidance (if needed) from the centre. District roads, and serviceable tracks of local importance fall under district level roads.

The traditional non-motorable trails have been divided as national main-trails and local main-trails, and the national main-trails have been further sub-divided as mule-tracks and bullock-cart track. The national level mule track/cart track will be built and maintained by the centre. The local level tracks will be built and maintained through local peoples' participation at the local level.

The classification of roads under national road transport system is as given below:

NATIONAL ROAD TRANSPORT SYSTEM

Appendix 6

During the Eighth Plan period, the following projects will be carried out after technical and economic feasibility studies and the assessment of resource-availability. The following projects have, however, been presented for illustration purposes and may be amended if necessary. Feasible roads may also be built under district level road programmes.

The resources available from food-for-work programme will

also be used in the road construction works.

- A. Construction projects to be started within the Eighth Plan_ period after conducting feasibility studies.
1. Sanfebagar-Martadi (Bajura)
 2. Waling in Syngja to Huwas Kushma in Parvat
 3. Syangja Naudanda-Kushma
 4. Sandhikhrk-Tamghas
 5. Tulsipur-Purandhara
 6. Terhathum Myanglung Bazaar-Aathrai
- B. Construction projects to be started depending on the availability of resources, after undertaking economic and technical feasibility studies during the Eighth Plan period. .
1. Tamagadi-Simraungarh
 2. KaTaiya-Kataharia
 3. Ilam-Fidim-Tablejung Road "(Black-topping)
 4. Tablejung-Terhathum Road
 5. Jauljiwi-Darchula Motor Road
 6. Chatara-Bailtar-Gaighat-Katari-Thoksil
 7. Fathehpur Gaighat
 8. Birgunj-Pokharia
 9. Chautara-Melamchi
 10. Tamghas-Panaha-Chhatwi-Daha-Aglung
 11. Damodar Bot (Kalakot Rajpur) - Lamahi-Koilabas
 12. Ilam Jitpur-Siddhi Thumka-Sopyang-Sanisichare-Birtamod
 13. Ilam (Banke) - Rabi-Madhumalla-Damak
 14. M.R.M. - Matiarwa-Manmara
 15. Naudanda-Karkineta-Jugle
 16. Aaruchaur-Panchamul-Daraun-Satupasal-Siddhartha Highway-Rang Khola
 17. Bharatpur-Thori
 18. Dharke-Bhimdhunga-Ring Road, Tunnel Road (Kathmandu)
 19. Taulihawa-Maharajgunj-Kharindrapur
 20. Hetauda-Nijgarh Bypass
 21. Bardghat-Dumkibas
 22. M.R.M. Bankatawa-Khajura
 23. Parasi-Harkatawa

Communications

Introduction

In the backdrop of the significance of communication in accelerating and sustaining the pace of development, communication is considered as an essential infrastructure. By virtue of the dominant role it can play in the flow of information, communication has a momentous and sensitive role in the task of acquainting the people with democratic norms and values and achieving the development targets through people's participation. Nobody can disregard the efficacy of the communication media in helping to make the people conscious and keep them well informed by effectively delivering the information on basic matters such as health, agriculture, family planning and education and to solve the country's problems by forming a creative and strong public opinion involving various groups and parties representing different ideologies towards finding solutions to national and international problems. Therefore, in view of its role in the attainment of prosperity in the developed nations and its significance, in accelerating and imparting efficacy to the development activities of the developing nations, no nation can afford to remain unconcerned about the befitting development of the communication sector. In the Context of our inability to achieve minimum standard/of living expected of a human being owing to poverty and illiteracy, the communication sector stands out even more conspicuously in its importance as a developmental infrastructure for a balanced pace of development. As the development of the communication sector is a must in the process of national development, it is imperative to remain alert with due sensitivity in the development of communication for facilitating a convenient and easy access of the people to fundamental constitutional rights by transforming the people into conscious citizens. Taking into consideration these perspectives, the development and expansion of the communication services has been accorded a significant place in the Eighth Plan.

Progress during the Seventh Plan:

Following progress has been achieved during the Seventh Plan period.

a. Postal Services

1. Setting up of post office (no.):	
• Area Post Office (Ilaka Hulak)	80
• Additional post offices	260
2. Expansion of postal routes (no.)	24
3. Construction and extension of buildings (no.)	363
• Construction of new buildings	3
• Completion of buildings under-construction	12
• Extension of building	1
4. Expansion of monetary services:	
• Money order service through post offices	90
• Saving bank services through post offices	25

In addition, necessary materials required' for strengthening of postal services were made available and training relating to postal services was imparted to 562 trainees. A sorting centre was also established at Birgunj during the plan period.

b. Telecommunication Services

1. Expan_fon of local telephone lines (no. of lines)	51,980
2. Expansion of Telex exchange capacity -(no. of lines)	256

In addition to the above, achievements, the digital microwave trunk route serVIce has been established and operated at Ilam in the east and up to Mahendranagar in the west. As regards the district headquarters and rural telecommunication, 200 PCOs and a single channel equipment for subscriber connection have been installed. Similarly, measures to improve the management, organisation and maintenance of telecommunication media were undertaken and the construction of off ice buildings, godowns and resident quarters for\the employees was completed.

c. Radio Transmission Services

The countrywide medium wave transmission programme has already been operated by completing the feasibility study. It will help the medium wave radio transmission stations to make distinctly audible broadcasts to almost all the regions of the country. Under this programme, medium wave transmission has already been operational from, Dhankutta, Dharan and Bardibas during the Seventh Plan period and the construction of medium wave radio stations at Surkhet and Dipayal has been started.

d. Television Services

Telecasting has already been initiated from Kathmandu, Biratnagar, Pokhara and Hetauda during the Seventh Plan period against the plan target of extending television services in the country by undertaking feasibility study. Works relating to the link Biratnagar transmission centre with the Kathmandu centre has also been completed. Similarly, the feasibility study to link the Pokhara centre with the central transmission has been completed. Construction work of the studio building of the Nepal Television has also been started.

e. National News service

Construction of buildings has been completed with the people's participation at Doti and Bharatpur for the development of national news service. Equipment has been supplied to, the National News Committee in accordance with the objective of making available some office equipment, news collection and printing equipment to the committee during the plan period in order to improve the quality of news services.

f. Printing services

Works relating to procurement of additional printing machinery, construction of store rooms and buildings etc. and the feasibility study of security press have, been completed in order to increase the printing capacity of the press under the Department of, Printing. During the Plan period, 38 newsreels were prepared by the Department of Printing as the responsibility of preparing documentaries and newsreels has been shifted from the Department of Press Information to the Department of Printing. Distribution of 353,000 posters portraying different important personalities of the country was done during the Plan period.

g. Press Information services

As the preparation of the documentary films, newsreels and poster publication and, distribution under the Department of Press Information have been shifted to the Department of Printing, the review relating to this has already been done under the Printing Services head.

h. Gorakhapatra

Works relating to the addition of printing equipment for the publications of the Gorakhapatra Corporation, arrangement of delivery van etc. for timely sale and distribution of daily publications, repair and maintenance of the central building with the addition of a floor have been completed. An offset press, a composing machine, a camera, a photo lens, an enlarger, a composing and page making desk and a computer have been purchased. Three wheeler vans and bicycles have also been purchased for quick delivery of published materials.

i. Film Production

The Royal Film' corporation produced only a total of four feature films during the Plan period. The target was to make the film corporation self reliant through film making upon the receipt of loan from the banks and the establishment of the laboratory by completing the construction work of the building. However, the intended move towards self reliance_ by making films was not materialized despite the receipt of loan from the banks. Nevertheless, the setting up on the laboratory has reached its final stage.

j. Recording Services

Shree Ratna Recording Corporation has recorded and produced discs and cassette tapes of 354 commercial and prayer songs etc. Shree Ratna Recording Corporation has been merged with the Nepal Television Corporation because of its inability to proceed towards self reliance by itself.

k. Frequency Management and Radio Monitoring

Frequency Management and Technology Analysis Division has been set up in the Ministry of Communications in order to undertake the frequency management and radio monitoring works. Organizational reforms have been made and necessary manpower has been arranged after splitting the division into two sub-divisions. Its capacity has also been augmented a little with the receipt of some equipment with ITU assistance.

Progress during F.Y. 1990/91 and F.Y. 1991/92

a. Postal Services

- | | |
|--|----|
| 1. Money order services expansion through post offices (no.) | 25 |
| 2. Saving ban_ services expansion through post offices (no.) | 53 |

3. Setting up of post offices: Additional post offices (no.)	30
4. Postal conveyance development Purchase of bicycles (no.)	231

In addition to these, the construction works of the post office buildings at Kalikot and Terhathum have also been completed.

b. Telecommunication service

1. Expansion of local telephone lines (no. of lines)	6,040
2. Expansion of STD service (no. of places)	2

c. Radio Transmission Services

Radio transmission has been started from Surkhet by establishing the medium wave transmission station at Surkhet as well as at Dipayal. However, regular transmission from Dipayal has not been possible due to the lack of reliable power supply.

d. Television Transmission

Pokhara transmission centre has been linked with the central transmission centre. In addition to this, works relating to the procurement of audio-visual equipment, production of programmes, collection, purchase, and transmission of programmes; completion of the construction of the studio building; organisation of training/seminars; and repair and maintenance of equipment were all completed as targeted.

e. Printing Services

Four documentary films were produced and released by the Department of Printing.

f. RASTRIYA SAMACHAR SAMITI

The Rastriya Samachar Samiti had no development programme during FY 1990/91. Construction of dark room and installation of telefax machines were accomplished during FY 1991/92.

g. Frequency Management and Radio Monitoring

No special programme relating to development works was implemented under this project during FY 1991/92. Procurement of computers, preparation of specifications for necessary equipment were accomplished during FY 1991/92 with the availability of expert services.

h. Film Production

Processing work has been initiated after setting up of a colour film laboratory under the Royal Nepal Film Corporation. Commencement of print production activity is still awaited due to incomplete set of machine supplied.

Existing Problems

Though predominance of the role of communication sector in the process of national development is a proven reality, the communication services in Nepal have remained quite insufficient till now. The situation is such that it has not been possible to supply different communication facilities to urban areas as per demand and almost all villages of our country are deprived of modern communication facilities. The construction of radio stations in required places of the country has just recently been completed for the medium wave transmission of Radio Nepal. Now, Radio Nepal has become the only communication medium in Nepal capable of reaching the general public. Though it is estimated that radio transmission will reach- clearly to about 90% of people, the condition does not permit all to enjoy even this facility due to the lack of their purchasing power. In addition to radio, postal, services, telecommunication, television and periodicals etc. are very much out of reach of the common people. As long as these media can not reach amidst the common people, awareness can not be generated among the people to the desired extent and its direct consequence may be reflected in terms of political instability and economic deprivation of the nation. Therefore, the detailed study of the existing problems in this sector and their solution is essential. Main problems in this sector are as follows:

1. Development of media autonomy and promotion of healthy journalism is still poised as a challenge in the communication sector. Also, the quality of the periodicals needs to be improved in addition to increasing their circulation. It is essential to proceed towards the promotion of healthy journalism by extending full autonomy to the communication media under the government, as healthy journalism is not only a real guide to the government but also a carrier of correct information to the people.
2. It has not been possible to provide essential postal services to almost half the number of villages in the country. It still takes a considerably long time for urgent letters to reach villagers at the remote countryside. The Seventh Plan statistics revealed that one post office provided services to 8,100 people

in an area of 66 sq. km. Prompt service can not be provided without substantially reducing this poor coverage figure.

3. The transmission of efficient medium such as television has been able to cover some urban areas only. The reality that 75 percent of the people of the country can not benefit from the transmission of television persists even now as this service can only be provided to areas having access to electricity. It is necessary to extend television service to all areas with access to electricity supply. At the same time, as the economically deprived people cannot access this facility by themselves, there is a need to establish community television centres to avail this facility to them.
4. Though substantial progress has been made towards the development and extension of communication services, this service has to be increasingly oriented towards other areas from the standpoint of equity, as this has been concentrated in the urban-areas especially within the Kathmandu Valley. It will be difficult to go against the principle of cost/benefit in its establishment and extension due to the fact that the most modern telecommunication services are extremely costly. Providing essential service such as telecommunication to the general mass is one of the important responsibilities of the government in spite of the foregoing conclusion that this service will be increasingly available to the people with high purchasing capacity. Therefore, it is necessary to gradually provide this service in the rural areas by cross-subsidising the cost and without much regard to quantifiable benefit/cost.
5. It is also necessary for mass communication media to provide social services in addition to commercial services without which it will be difficult to generate social awareness among the people. But there is a likelihood of inadequacy of such services as the social and educational services do not generate sufficient returns to the media. For this, a convention has to be set to formulate programmes related to the mass people such as education, health, agriculture etc. in a coordinated manner.
6. The programmes transmitted through mass media have to be standard and effective as the programmes transmitted by radio and television greatly influence the people. In order to achieve this it is essential to pay special attention to the establishment of an appropriate training centre, development of skilled manpower and also the procurement and maintenance of equipment.
7. The existing situation of running the economically unviable corporations with the limited resources and means of His Majesty's Government can not be considered a healthy practice. With an unbiased study of the corporations associated with services other than the extremely sensitive ones such as education and public health, it is advisable to dissolve or handover them to the private sector for effective management.

Background of the Eighth Plan:

In view of the important role the communication sector is expected to play in a country like ours lacking in developed transport facilities and fettered with severe geographical constraints, it is extremely essential to make the communication media easily accessible to the general public. In spite of the establishment of the basic communication infrastructure in the country as of date, there is still an evident need to continue rendering the communication media more sustainable, reliable and easily accessible in the face of the development of the fast evolving, new and ultra-modern communication technologies in the world. Although, compared to the situation four decades ago, there has been a significant development in this sector; it still lags far behind the growing needs and demand of the people. While the demand for communication services is steadily increasing in consonance with development requirements, the shortfall in the means and resources pose a serious barrier. Therefore, in spite of the limited investment potential of the country, it has been incumbent upon the nation to pay, due attention to the befitting development of this sector. In the given circumstances, while it is essential to establish at least one post office in one Village Development Committee through a massive extension of the only economical and sustainable communication medium of postal services, it is important to reconcile the demand and supply situation of the telecommunication services in the urban sector. It has become equally important to link the-district headquarters and important rural areas to the telecommunication network. Television is no doubt a very effective medium of communication but till now its transmission is confined to a few urban areas only. In view of the profound impact the television transmission may have on the people, it needs to be extended to all areas having electricity supply. Similarly, necessary efforts should be continuously made towards the maintenance of quality standards and the strengthening of Radio Nepal broadcast. Besides, while efforts for the proper development of this sector should be continued, gradually making the entire sector of communication self reliant, unflinching attention needs to be paid to the development of printing technology, and journalism, the extension and consolidation of news and information services, the development of skilled manpower and the amelioration of the service standards.

Objective:

1. To inspire the people to involve themselves in the task of national development by augmenting their level of awareness and making them aware of their rights and duties through their guaranteed right to information.
2. To develop and expand the communication sector as an important infrastructure for the overall development of the country.
3. To expand communication services so as to make them easily accessible to rural areas through the adoption of appropriate technologies.
4. To make the communication sector self-reliant from the economic and financial points of view.

Policy

- special attention will be paid to develop telecommunication anti postal services to enhance trade, industry and tourism and to meet increasing communication requirements of the country.
- The existing telecommunication services will be further improved and expanded by adopting an appropriate technology in order to provide reliable, easily accessible and quality services both nationally as well as internationally. In the process, ISD and STD services will be provided to all district headquarters. Requirements of telecommunication services of industrial, commercial and urban subscribers will be met wherever feasible.
- In view of the government's social obligations, rural telecommunication services, will be provided by adopting technology appropriate to the geographical features of the country.
- Along with the extension of postal service to the rural areas, it will be activated to provide monetary services such as postal savings and money orders especially in rural areas. In addition, expedited mail services will be introduced.
- Necessary improvements will be made in order to deliver postal goods quickly and reliably.
- Necessary steps will be taken towards the establishment of a second channel in the medium wave by strengthening and expanding radio broadcasting services. steps will also be taken to initiate radio broadcasting through frequency modulation (FM) in the private sector.
- The coverage of television will be expanded through appropriate technology and its use in the educational sector will be enhanced.
- Royal Nepal Film Corporation will be made self reliant before taking necessary, steps to privatise it in the future.
- The Department of Press Information will be equipped with enough physical facilities to ensure an uninterrupted flow of information. Further, necessary incentives will be provided to the private sector to ensure the adequate flow of information to the public through the development of healthy journalism.
- The public sector communication media will be granted more autonomy.
- Due emphasis will be given to the development of manpower for enhancing the service standards of telecommunication, television, radio, and postal services and other agencies' under communication sector.

Programmes:

1. Department of Postal Services

Setting Up of Post Offices

In the coming five years, 400 Area-Post Offices and 1800 Additional Post offices will be set up in a bid to provide easy postal services to the general public. A minimum of one post office will be established within each Village Development Committee.

Development of Mail Conveyance and Quality Standard

Five new postal routes and internal expedited mail services *in* all the 36 municipalities will be extended in the process of making the postal services prompt and standard. New services such as cash on delivery and external expedited mail service will also be introduced. In addition to this, the postal services will be improved through the procurement of mail vans, necessary machines and equipment. In the context of promoting the quality of services, 800 persons will be provided training and 10 seminars will be held within the plan period.

Construction and Extension of Buildings

A total of 15 buildings including three district post offices, 10 Area Post Offices, one training centre and one central stamps store will be constructed within the plan period in the process of strengthening the post offices

physically. Four of these buildings will be constructed in the Eastern region, 5 in the Central region, and 2 each in the Western, Midwestern and Far-western regions. Programmes of providing electricity, water supply, toilet to the post offices hitherto 'deprived of these facilities will also be implemented along with the extension of some buildings.

Extension of Monetary services

Money order service and savings bank service will be extended through 403 and 596 post offices respectively during the plan period in connection with, the extension of monetary services in the rural areas through the post offices.

Strengthening of General Post Office (GPO)

Working efficiency of the GPO in Kathmandu will be enhanced by extending the building, strengthening the counter, procuring necessary equipment, extending, post box building, adding 3000 post boxes and providing consultancy service.

Postal Master Plan

A Postal Master Plan will be prepared for mobilising the postal service as per the long term national development needs by developing it into a people oriented, high quality and effective service institution.

2. Department of Press Information

strengthening of Press Information

The Department of Press Information will be strengthened in order to facilitate the flow of information among the general public, local and foreign journalists as a process. of guaranteeing the right to information of people regarding policies and programs of His Majesty's Government and matters of national and international importance. In this process, necessary communication equipment will be / procured subsequent to the construction of a suitable building for the Department of Press Information. A *media* centre and a press conference hall will also be set up.

Promotion of Journalism

Information centres at Biratnagar, Birganj, Pokhara, Nepalganj and Dhangadhi will be run as regional media centres by providing necessary equipment such as telephones, telefax, photo transmitting machines etc. In the context of developing the quality standard of journalism, scholarships in journalism will be provided, 10 workshops/seminars will be held and about 200 journalists will be taken to an observation tour to different parts of the country.

3. Department of Printing

Extension of Building and Security Press

The existing building of the Department of Printing will be remodelled to suit the requirements of the security press entailing extension, repair and maintenance works and necessary works.

4. Frequency Management Division

The radio frequency index will be computerised for the purposes of radio frequency management and monitoring and a monitoring station with a capacity of monitoring from 1.6 to 1000 Megahertz will be established.

Radio Broadcasting Services Development Board

5. Extension of services

Feasibility study will be undertaken for the establishment and operation of a second channel in the medium wave in connection with the extension and strengthening of the radio broadcasting service.

Development of Manpower

A modern training unit will be set up to meet the requirement of both radio and television and an appropriate arrangement will be made for conducting training. Services of experts in the related fields will be made available as necessary.

6. Nepal Television Corporation

Extension of Network

Efforts will be made to provide transmission services through Nepal Television to all the areas with access to electricity during the plan period.

Studio Establishment

A central television studio will be established in Nepal Television Corporation's own building.

Establishment of Calibration and Maintenance Centre

Timely and proper repair and maintenance of equipment is essential in order to maintain the quality standard of the television transmission. In order to achieve, this, a calibration and maintenance centre will be established during the plan period.

Construction of Building

A central administrative building and four buildings at different places for the local programme production centres will be constructed.

7. Rashtriya Samachar Samiti (RSS)

An strengthening project will be implemented in order to strengthen its services. Under this, floors will be added to RSS buildings at Kakarbhitta and Birganj and the buildings at pokhara and Biratnagar will be extended. In addition to this, 2 high quality cameras for the photographic service, 3 tape monitoring and tape recording sets for the radio tape service will be procured_

8. Royal Nepal Film Corporation

The colour film laboratory will be brought into professional operation upon its full establishment and consolidation in order to privatise it in future after heading the corporation towards self-reliance.

9. Nepal Telecommunication Corporation (Fifth Telecommunication project)

District Headquarter Telecommunication Project (Rural Telecommunication)

Twenty seven district headquarters (Taplejung, Panchthar, Terhathum, Sankhuwasabha, Bhojpur, Solukhumbu, Okhaldhunga, Khotang and Udayapur of the eastern region, Dolkha, Sindhupalchok and Rasuwa of the central region, Manang of the western region, Dolpa, Mugu, Humla, Jumla, Kalikot, Pyuthan, Rolpa, Rukum, Salyan, Jajarkot, Dailekh of the midwestern region and Bajura, Bajhang and Achham of the far western region) not having telephone services will be linked with the digital transmission link by providing each headquarter with a 'minimum of 6 telephone lines along with STD and ISD fac_lities.

Area (Ilaka) Telecommunication Project (Rural Telecommunication)

PCOs will be established and some telephone lines will be made available with the facility of connecting district headquarters adopting appropriate channels among VHF/UHF/HF in about 400 rural areas (Ilakas) of trade and economic significance in the 64 districts listed in this paragraph. The rural areas (Ilakas) where this programme will be introduced will be decided after a survey. The districts will be as follows-Taplejung, Panchthar, Ilam, Jhapa, Sankhuwasabha, Terhathum, Bhojpur, Dhankuta, Sunsari, Morang, Solukhumbu, Khotang, Okhaldhunga, Udayapur, Saptari, Siraha, Dhanusha, Mahottari, Sarlahi, Sindhupalchok, Kabhre, Bhaktapur, Kathmandu, Lalitpur, Nuwakot, Rautahat, Bara, Parsa, Makawanpur, Chitawan, Gorkha, Manang, Lamjung, Tanahun, Kaski, Syanja, Parbat, Baglung, Palpa, Nawalparasi, Rupandehi, Kapilbastu, Gulmi, Arghakhanchi, Pyuthan, Dang, Salyan, Rolpa, Rukum, Dailekh, Surkhet, Banke, Bardia, Jumla, Kalikot, Bajura, Bajhang, Achham, Doti, Kailali, Darchula, Baitadi, Dadeldhura and Kanchanpur.

Eastern Regional Telephone project

A total of 4,910 digital telephone lines will be installed and distributed with 250 lines in Ilam, 1500 lines in Biratnagar, 1500 lines in Dharan, 150 lines in Siraha, 500 lines in- Birtamod, 500 lines in Dhulabari, 250 lines in Rangel and 150 lines each in any two appropriate places of the eastern region.

Central Regional Telephone Project

A total of 46,830 digital telephone lines will be distributed by adding 750' lines in Janakpur; 90 in Malangwa; 1400 in Birganj; 350 in Hetauda; 50 in Gaur; 750 in Bharatpur; 500 in Banepa; 4,000 in Chhauni exchange; 7,000 in Chabahil exchange; 4,000 in Naxal exchange; 4,000 in Jawalakhel exchange, and 1,640 in Bhaktapur. Installation of 13,000 lines in Kathmand_ central; 1,500 in Balambu; 2,000 in Gongabu; 750 in Bhadrakali (Budhanilkantha); 750 in Indrayani (Sankhu); 750 in Kirtipur of Kathmandu; 740 in Thaiba and 1,000 in Thecho of Lalitpur and 1,500 in Thimi of. Bhaktapur and 150 lines each in any two appropriate places of the central region will also be completed with the establishment of new telephone exchanges.

Western Regional Telephone Project

A total of 6,550 digital telephone lines will be distributed by adding 2,000 lines in Pokhara, 1,000 in Bhairahawa, 2,000 in Butwal, 250 in Taulihawa. Installation of 250 lines in Damauli, 500 in Mangalpur, 250 in Parasi and 150 lines each in any two appropriate places of the western region will also be completed with the establishment of new telephone exchanges.

Midwestern Regional Telephone project

A total of 800 digital telephone lines will be distributed by adding 500 telephone lines in Nepalganj. Installing of 150 lines each in any two appropriate places of the midwestern region will be also be completed with the establishment of new telephone exchanges.

Far Western Regional Telephone project

A total of 1,450 digital telephones -lines will be distributed by adding 900 telephone lines in Mahendranagar, 100 in silgadhi and 150 in Rajpur (Dipayal). Installation of 150 lines each in any two appropriate places of the far western region will also be completed with the establishment of new telephone exchanges.

Microwave Digital Main Transmission Link project

Qualitative improvements will be made by extending the trunk channel between the following places after the establishment- of 68 Megahertz digital transmission link: Kathmandu-Pokhara, Kathmandu-Bhairahawa, Kathmandu-Nepalganj, Kathmandu-Bharatpur, KathmanduTaulihawa, Ka_hmandu-Dhangadhi, Pokhara-Bharatpur, Pokhara-Bhairahawa, and Bhairahawa-Nepalganj.

International Telecommunication Service Extension and

Data Transmission project

A total of 696 circuits will be added in the earth station. Data exchange will be set up in the capital and extension of circuit will be undertaken in the terrestrial link between Nepal and India.

Building Construction project

The central office building in Kathmandu, office building at Jawalakhel, power workshop building at Chhauni, eastern regional office building in Biratnagar, western regional godown at Mangalpur, office building in Pokhara and office building at Malangwa will be constructed and exchange building at Naxal and microwave building in Biratnagar will be extended.

organisation and Management Improvement Project

- a. Necessary programmes will be implemented for the enhancement of work efficiency of the employees.
- b. Computer network will be established between related offices.

Telecommunication Training Centre Extension Project

The existing _training centre will be extended and upgraded.

Details of Expenditure

A detail of expenditure to be incurred in the communication sector during the Eighth Plan period is given in the attached Appendix 1.

Appendix 1

Communication Expenditure Details

Particulars of Project	Details of Expenses in Thousands Rs.				
	Total	HMG	Corporation	Foreign Grants	Foreign Loans
1. Department of Postal Services	112770	110770		2000	
Establishment of Area (liaka) post offices	26800	26800			
Establishment of additional post offices	28800	28800			
Development of postal conveyance and quality standard	19629	19629			
Construction and extension of building	12900	12900			
Extension of saving Bank Services	7152	7152			
Strengthening of	12250	10250			
Formulation of Postal Master Plan	400	400			
2. Department of Press Information	25300	25300			
Strengthening Press Information					
Purchases of land and construction of buildings	15000	15000		2000	
Establishment of media centre and conference hall	4000	4000			
Procurement of Communication equip.	2000	2000			
Journalism Development Program					
Strengthening of communication centres	2500	2500			
Fellowship	500	500			
Workshop/Seminar/Tours	1300	1300			
3. Department of Printing	7000	7000			
Extension and repair and maintenance of buildings and program relating to security press	7000	7000			
4. Frequency Mgt. Div.	18893	2500		16393	
Computerisation of radio frequency index					
Establishment of monitoring stations					
5. Radio Transmission Services Development Committee	55610	55610			
Feasibility study of the medium-wave second channel	2000	2000			
Establishment and operation of training center	53610	53610			
6. Nepal Television	509900	73850		436040	
Establishment and strengthening of transmitting stations	180000	31650		14850	
Establishment of central studio	141200	14500		126350	
Establishment of calibration lab and a maintenance centre	81000			81000	
Procurement and installation of E.N.G. and E.F.P. Equipment	89000	9000		81000	
Construction of buildings	18700	18700			
7. National News Committee	2150	2150			
Photo services	100	100			
Radio Tape Services	50	50			
Construction and Extension of building	2000	2000			

8. Royal Nepal Film Cooperation	13000	13000			
Setting up. Strenthening and operation of colour film lab.	13000	13000			
9. Nepal Telecommunication Corporation	3090377		442730	556572	2091075
District HQ Telecommunication project	288082		7633	280449	
Area (liaka) Telephone Project	356127		80004	276123	
Eastern Regional Telephone Project	184629		27730		156899
Central Regional Telephone Project	1487887		173884		1314003
Western Regional Telephone Project	258825		36057		22768
Mid Western Regional Telephone Project	36833		5061		31772
Far Western Regional Telephone Project	48374		6715		41659
Microwave digital main transmission link project	134511		16100		118411
Internal telecommunication service					
extension and data transmission project	65724		5928		59796
Building construction and extension project	75276		75276		
Organization and management development project	149909		4200		145767
Extension of training centere	4200		4200		
Total	3835000	290180	442730	1011015	2091075

Industry and Mining

Introduction

It is an indisputable fact that the development of the industrial sector plays an important role in the economic upliftment of the nation. . As long as this sector can not be expanded on a promotional basis, proper development of the economy can not be possible. The main objective of the industrial development is to mobilise properly the labour, capital and the .natural resources, available in the country towards industrialisation. The economy is still dependent mainly upon agriculture in spite of the various efforts in the past. Though efforts were made in the past decade towards diversification and development of industry to some extent, it has not been possible to bring continuity in the growth rate of industrial production.

The impact of industrialisation has been low in boosting the economy due to the growth of low value generating, inefficient and non-competitive industries in the country because of the control oriented policy and excessive protectionism adopted in the past. Besides, there are clear indications that export oriented industries can not develop to the desired level as long as protection is extended to the import substitution industries. Satisfactory progress has not been achieved in most of the production oriented public corporations. As a result, the investment has become unproductive on the one hand; and there has been adverse effect on the participation of the private sector on the other.

The contribution of this sector in the economy has still been minimal because of the failure to develop it in a sustainable manner due to policy distortions in the past. While the administrative control, the complicated licensing and registration procedures and the unwarranted delays etc. have discouraged the private investment in this sector, it has not been possible to attract the foreign investment as expected due to the excessive control and the lack of transparency in the system.

In this context, it has become essential to inter-coordinate the economic policies and strengthen the implementation process with the elimination of policy distortions of the past in order to enhance the contribution of the industry sector in the national economy.

Progress during the Seventh Plan

Preparation of medium and long term industrial plan, formulation and implementation of Industrial Enterprises Act 1987 , consolidation of industrial statistics, organisational reforms of the ministry and departments etc. can be taken as some of the achievements worth mentioning accomplished during this Plan period. Similarly, the small industry sector products, especially the readymade garments and woolen carpets, have made significant contribution to foreign currency earnings through their increased export.

The production of certain industrial commodities declined due to inadequate supply of raw materials and the primary commodities during the last two years pf the Seventh plan period. But a positive growth was seen in the products like detergent powder, leather shoes, processed fruits, plastic goods, woolen carpets, vegetable ghee, paper, synthetic cloth, sugar, beer, liquor, garments, slippers, processed leather, noodles, refined vegetable oil, zinc sheet, cement, polythene pipe, and animal feed. At the same time, normal growth was observed in the industrial products like soft drinks, rosin and turpentine, cigarette, tea, dry cell battery, mustard oil, processed -milk, matches, and strawboard. The growth in the production of biscuits, textiles, jute materials, plywood, iron rods and angles, steel utensils, agricultural equipment, G.I.H.B.- cable, is seen-to have declined. until the end of Seventh Plan period, while much growth was observed in the products like vegetable ghee, noodles, biscuits and animal feed, liquor, beer, soft drinks, cigarettes, P.V.C. slippers, detergent soap and powder, paints, rosin and turpentine, polythene pipe, and other plastic materials, due success was achieved in gaining foreign exchange by exporting the garments and the woollen carpets to a remarkable extent.

Certain degree of progress has been noticed in the expansion of industrial estates in Patan, Pokhara, Dhankuta and Surkhet, but minimal progress is observed in Dharan, Butwal, Nepalganj and Bhaktapur. Of the proposed industrial estates in Dhangadhi, Rajbiraj, Panchkhal and Ghorahi, only Rajbiraj indu_trial estate is being constructed under the Indian assistance, whereas the construction of others have not even started. Feasibility studies have been conducted to establish industrial estates in Nuwakot, Jhapa and Lamahi (Dang).

The average capacity of the industries operated by public sector during Seventh Plan period is only 64.8 percent. While that of Birgunj Sugar Mills and Janakpur Cigarettes Factory were found to have exceeded their targets, the industries like Harisiddhi Bricks and Tiles Factory, Bhaktapur Bricks Factory, Hide Collection and Development Corporation, Hetauda Textile Industry, Royal Drugs Ltd., Raghupati Jute Mills, and Balaju Textile Industry have been found to have produced much less than the targeted amount. -The production of Himal Cement Factory, Hetauda Cement Factory and Nepal Orind Magnesite have been quite lower than were set in their respective targets. In this Plan period,. the construction works of Bhrikuti Paper Factory, Lumbini Sugar Mills were

completed, but the works of Butwal Spinning Mills and Udaypur Cement Factory have been only partially completed.

Realizing the fact that most of the public sector industries have not been able to function in a commercially viable way as expected, they were aimed to be privatized; but no progress was made in this regard. out of 23 public sector industries reviewed for their financial status, only 7 were found to have run in profit and the rest in loss. No satisfactory improvement has been experienced in most of the public sector industries even in terms of labour and personnel productivity.

Industrial planning and monitoring systems were initiated in the Seventh Plan in order to conduct a(detailed study of the positions of the existing industries within the country in a planned way, to collect reliable and the latest data of the productive industries, to undertake regular supervision and evaluations of the industries in order to see that the facilities made available to them are not misused.

Qualities of 200 items were determined within the Plan period with the aim to improve the standards of the goods produced within the country. In the same way, works were undertaken in connection with the formulation of rules and regulations with regard to the determination of quality to protect the interest of consumers, training the people for skill-development, providing the technical and advisory services and with the granting of quality control symbol to ten products. The Hide Collection and Development Corporation made a notable progress within the plan period in collecting and preserving the raw hides in order to provide raw materials to -the indigenous industries.

In the field of mineral exploration, works conducted under the petroleum exploration project within the Plan period were 3580 Km. of seismic survey, 3000 metre deep hole drilling, measures of 600 Km. geological section and 800 petro-chemical samplings.

The works like trenching of 1600 cubic metres, radio metric and chemical surveys in 1300 sq.km. were completed in Chure Range in order to explore Uranium under mineral exploration programmes. Investigation works have begun in Kakuwa of Sankhuwasabha district for the investigation of lead in that area. Geo-physical survey in 30 sq.km. and geo-chemical survey in 10 sq.km. were completed against the target of geo-physical and geo-chemical surveys of 400 sq.km. and a detailed investigation in 10 sq.km. in Lungri of Rapti zone towards the exploration of go'ld within the Plan period. Under the mineral exploration proj_ct, studies related to phosphorite were conducted in Baitadi, Bajnang districts and lime" stone investigation in 65 hectares in Dhankuta was completed during the same period. In the same way, under the coal exploration programme, though the target was to have detailed investigation in Kathmandu Valley, the available coal being of low quality and in extensively scattered state, no detaile9 works were conducted.

Under the regional geological and mineral survey the coloured geological map in 1:250,000 scales of " the southern and central Nepal, black and white geological map in 1:50,000 scales of the east and geological map in 1:1,000,000 scale of the kingdom as a whole were prepared. The study of 11,500 sq.km. area upto the Himalayan region in the north has also been completed. An intensive map in 1:5000,000 scales after surveying the aftermaths of earthquakes and other geological hazards of the earthquake affected districts of Udaypur and the adjoining districts, engineering geological maps of 264 hectares for Pashupati Development Area, and land-slide inventory and risk mapping of 3960 Km. have been prepared.

Micro intensity study works have been accomplished as targeted towards geophysical survey and exploration of the urban areas like those of Kathmandu, Pokhara and Hetauda. Ten million tonnes of lime stones in Dhankuta and thirty million tonnes in Surkhet have been certified under cement factory feasibility study. In the same way, towards mine development under natural gas project, a drilling work of 2,138 metre in 26 sq.km. has been completed in Kathmandu.

One-year and two-year general and high level trainings were given to 14,714 people by the Department of Cottage and Village Industry and Cottage Industry Development Board. The trainings aimed at improving the dexterity of the artisans and at preparing artisans and entrepreneurs in various subjects so that cottage and village industries would be developed. Besides, pilot projects were launched by carrying out studies on the feasibility of industries, technical support to the industries, preparation and distribution of schemes and the survey of cottage industries. A profile was prepared by conducting seminars and visiting industries in course of publishing industrial statistics. Industrial products costing Rs.66 million have been sold and equipment and the raw materials of Rs.889'million have been made available by Cottage Industries and Handicrafts Emporium.

The progress of the cottage industry during the Plan period appears to have been as follows.

Number of Registered Industries	5,432
Total Capital Investment (Rs. in Thousand)	21,33,75
Annual Production Capacity (Rs. in-Thousand)	96,09,16

The industries related to rice, pulses, oil, flour and furniture are the major registered industries.

Progress during Fiscal Years 1990/91 and 1991/92

The average growth rate of industrial products is about 23 percent for the years 1990/91 and 1991/92. This growth rate has been possible due to the industries having been operated to the optimum capacity with an adequate supply of raw materials and also due to some industries having begun their production. During these years the production capacities of sugar, bricks, tiles, cement, and jute industries increased while those of shoes and beer remained constant.

In the same way, during the first nine months of the fiscal year 1991/92 the production of food stuff, detergent powders, cement, beer, battery, plastic items, jute items, increased as compared to the/ production of the previous years, but there was no such remarkable progress in the production of paper, soap, iron-rods, cigarette, ghee, and synthetic fabrics. During this period, altogether 1557 small, medium and large scale industries were registered requiring the investment of Rs.5,530 million, whereas only 269 industries were actually permitted to be operated.

Necessary policies, infrastructure and data-base for the industrial development, organizational consolidation and improvement processes were begun in this fiscal year. According to the government policy of privatization, necessary privatization policies were formulated and systematically implemented. Together with' the new industrial policies, foreign investment and one window policies were brought to the people towards the end of the fiscal year 1991/92. As such, excepting some limited numbers of industries, other industries were exempted from obtaining licence.

Existing Problems

1. The internal markets remained narrow due to the reason that no expected growth has taken place in the income and purchasing power of the majority of the people.
2. There is a lack of adequate linkage between the industries and the non-industrial sectors in the process of industrialisation in Nepal. This has put a limit to income generation and the employment in the economy on the one hand, and most of the industries are relying on foreign raw materials, on the other.
3. There has not been sufficient development and expansion of the basic infrastructure like transport, communications, electricity necessary for the rapid development of industries.
4. Economic sectors and the capital market have not been developed to an appropriate level in order to provide necessary capital to the industrial sector.
5. It has been quite difficult for the Nepalese products to compete in both internal and the external markets due to inadequate efforts made towards the improvements in qualities _f the Nepalese industrial products.
6. No achievements have. been made in the production of raw materials within the country and also in the productivity, of the labourers.
7. No policy wise structure suitable for industrialization has so far been prepared.
8. Encouraged by the protectionist policy of the past, continuity in industrialisation has not "been achieved because of the growth of a protection seeking tendency among industries without making efforts for more value addition.
9. Appropriate transportation network has not yet been developed to transport the goods produced by cottage industries to markets.
10. There is lack of institutions to provide financial assistance (to be used for capital and recurrent expenditures) necessary for cottage industries.
11. The supply of technology and the investment to mineral industries has not been forthcoming owing to the technical complications and exceedingly high investment involved in them.

Background of the Eighth Plan:

The possibilities of economic development can be further strengthened only if the economy based on agriculture is developed through the process of industrialization by mobilizing labour, capital and the natural resources available in the country. It is necessary to take appropriate measures in order to avoid slackness and instability observed in the agricultural and industrial productions and also to intensify the promotion of production and employment. There is a need to promote the impacts of industrialization in consolidating the economy by improving and developing the industries which are able to raise the value added contents of the items produced and those which can compete in the national and international markets. There is a need to promote competitive industries on the basis of efficiency and comparative advantages. For this, it is necessary to bring about a great

degree of improvements in the policies to be adopted by the country on customs, trade, foreign exchange, industry and foreign investment. It is also highly imperative that the consolidation of direct and indirect industrial infrastructure be made, along with the elimination of the procedural hurdles.

It is necessary to involve the private sector actively in the industrialization along with the efforts of successful management of the policies and their implementation. Since the industrialization of a country is not possible only with efforts of the government without the participation of the private sector, and since long term industrial development is not possible without attracting the private sector investment which requires open market and sound competition, appropriate atmosphere needs to be created for drawing investments from the private sector. The public sector, industries which might discourage the private participation should be gradually handed over to the private sector itself. On this ground, the presently adopted industrial policy will be actively implemented.

In a country like Nepal which is poor and constrained in natural resources too, industries can be developed only through setting up of industrial infrastructure by ways of taking appropriate measures to create suitable atmosphere for foreign investment and the transfer of technology. In this context, by the successful implementation of presently announced foreign investment and one window policies, the foreign investment will be channelled into the country and progress will be made in the import of technology, transfer of management and technological skills, development in the competitive business concepts, reaching out to the international markets and growth in the productivity, which are expected to make significant contribution to the development of efficient and competitive industries.

There is a need to make our industrialization process dynamic and consolidated by developing and expanding cottage and small scale industries in keeping with our limited markets, level of technical know-how, position of transportation, and the geographical structure of the country. The industries of this very sector must be given top priority and be developed and expanded accordingly, within the Eighth Plan period for the reason that they will play a significant role in the balance of payments by substituting imports and bringing self dependency in the small but necessary items, consequently to contribute importantly in the overall economy of the country.

There are great possibilities of mining resources due to geological and geophysical structure of the country. Identifying these resources and bringing them to the commercial use will be highly significant in view of industrialization and the economic development of the country. In this context, measures need to be taken for purposeful utilisation of these mineral resources by formulating appropriate policies and programmes in the Eighth Plan.

Against this background, following objectives are set for the development of industry and the mines for the Eighth Plan.

Objectives:

1. To generate extra income and employment by enhancing inter-relations between productions oriented industrial sector and other economic activities.
2. To develop this sector as an important means of earning foreign currency by improving the quality, productivity and the production of exportable items.
3. To promote medium and large size industries in order to substitute imports and also to fulfil internal demands by improving cottage and small scale industries using the locally available resources.
4. To build necessary infrastructure to identify the mineral resources which may be used commercially in the country.
5. To increase national-production by developing industries based on existing mineral reserve.

Policies

1. The import substituting and export promoting industries will be developed on the basis of competitiveness in order to use comparative advantages in the country. In the same way, industries will be established, expanded and modernized on the basis of the capacity and the comparative advantage of the industries.
2. Top priority will be given to private participation for the promotion and development of industries, and the existing policies relating to licence, foreign exchange, trade and taxes will be formulated, legalized and implemented in a more liberal and transparent way. Similarly, policies and guidelines will be formulated and effectively implemented with regard to the transfer of existing government sector industries and the industrial estate to the private sector.

3. Emphasis will be given to the development and expansion of cottage and small scale and agro based industries in order to generate the income and purchasing capacity of the people by increasing the opportunities for productive employment.
4. Foreign investment will be increased for the maximum utilization of managerial and technical skills, modern technology, foreign capital in the process of promoting industries within the country itself.
5. Emphasis will be given to the improvement of technical skills and industrial capacity in order to improve the country's competitiveness in the international markets by bringing about reforms in the quality of the industrial productions.
6. Environmental Pollution Control Act, rules, regulations and guidelines regarding it, will be formulated and then put to operation in order to minimize negative impacts of the establishment of industries, their expansion and diversification on environment.
7. A technical research and development policy will be prepared for the purpose of selecting, evaluating and monitoring the nationally viable technology to help the small scale industries in performing research and development activities.
8. Emphasis will be given on the modernization of industries equipped with old and unproductive machines, and the reinstallation and consolidation of sick industries.
9. Industrial estates will be established in various places to build integrated infrastructures of the industries.
10. Industries having backward and forward linkages with the large scale and other cottage industries will be developed in order to promote industries based on locally available raw materials. Necessary policy steps will be taken to encourage linkages between informal sector (cottage industry units and the organized sectors).
11. An export processing zone will be established and operated within the plan period to promote the fully export oriented industries.
12. A one-window system will be practised to facilitate the national and foreign investors with all types of government provisions and the services from one and the same agency. Similarly, top priority and appropriate facilities will be given to the industries known to be of national importance.
13. Efforts will be made to maintain regional balance in industrialization by providing the financial help and facilities.
14. Growth in production and productivity will be furthered in the form of a campaign.
15. Additional incentives will be given to the industrialists who re-invest their profits from industries in ancillary industries of their own.
16. Institutional arrangements will be made to familiarize the cottage and small scale industries with market, technology, skills and the like.
17. Existing financial institutions will be strengthened to financially support the industrial sectors, and new financial institutions will be established to assist the cottage and small scale industries with financial arrangements.
18. Financial and capital markets will be developed by amending Security Exchange Act in order to ensure capital flow, necessary for industrial development.
19. Amendments will be suitably made in the Company Act and all relevant Acts in order to achieve extensive public participation in industrial development.
20. National and foreign investment and technology will be attracted to properly organize and conduct mineral exploration and development, as well as geological activities in a planned manner.
21. Various laboratories, technical and logistic services necessary for the mineral exploration and the development of such works will be properly managed.

Sub-sectoral Policies

From the Eighth Plan onwards, the sub-sectoral programmes, will be formulated and implemented by coordinating the industrial sector programmes with the extensive national Plan. Accordingly, activities will be divided into five sub-sectors for implementation.

In addition to the work policies mentioned above, following policies relating to sub-sectors will be followed in order to fulfil the above extensive objectives. Highly significant industrial products and those which may be produced with greater competitiveness and capacity within the country will be the basis of formulating such policies.

Food, Beverages and Tobacco Sub-sector

Appropriate priorities will be determined and programmes will be formulated and launched accordingly in view of the probable contributions of the industries of this subsector in "economic development and national production. Proper modernisation policy measures will be taken *upon* their formulation to modernise traditional industries (rice, pulses and oil mills etc.) for achieving an increase in production and productivity and a reduction in production costs. Necessary arrangements will be made for the export of the products of high export-promotional value such as spices, processed fruits, mushrooms, noodles, animal feed, meat, tea and floriculture items etc. by according high priority in their production and processing. Joint efforts from the government and private sectors will be made for extensive improvements in the quality standards of the products of this subsector, and' the institutions providing research and development services to the small and cottage industries of the subsector will be' further consolidated.

Textile and Garmentsubsector

Equal protection will be given to -all textile industries being operated within the country to make use of all kinds of raw materials and also to produce materials like yarn, clothes, thread and fabrics etc. These industries will be developed orienting _hem towards export as their products are exportable. A detailed plan will be formulated and put into operation in order to develop the garments and other industries, related to silk production and processing ,high quality carpet product1:onand high quality leather and leather goods production as export oriented industries. In the same way' programme will be launched to consolidate the sick jute mills.

Chemical subsector

Private sector, investment will be encouraged ,by enhancing the capacity and efficiency of these types of capital and technology intensive industries, keeping in mind that the industries in these subsector are mostly operated in government investment. In the same way, encouragement will be given to joint private-government and joint foreign-private sector investment in the potential industries which have not received sufficient private sectoral involvement. Appropriate measures will be taken to develop sound bases for the research and development and adaptation of foreign technology within the country for these industries as they will be highly technical and based on foreign imported materials.

Mechanical Engineering subsector

Necessary works will be carried out to' establish additional training institutions, together with the consolidation of existing ones in order to develop skill oriented manpower. A well facilitated engineering complex at the national level will be setup in order to technically support the small scale engineering industries.

Electrical and Electronic subsector

Encouragements will be given to foreign and private joint investments in these sub-sectoral industries which, though technology and capital intensive, are not efficiently being operating due to the lack of proper private sector participation. suitable programmes will be formulated and then put to operation with regard to the establishment. and the development of strong research and training institutions for the purpose of increasing , the technical efficiency by developing efficient and skilled manpower.

Targets and programmes

1. Industrial output

It is estimated that the average growth rate of industrial output will be 12.4 percent in the Eighth Plan. According to this projected estimate, the annual growth in the value added will be 10.8 percent which will meant that the total value added of the productive industries by the end of the Plan period will be Rs. 12,17 million at F.Y.1991/92 prices. The growth rate of industrial outputs like rosin, turpentine, medicine, papers, noodles, readymade garments, tobacco, cotton yarns, synthetic yarns, sugar, tea and poultry feeds till the end of the Plan period will be more than 20 percent as against the base year 1989/90. The rate of growth for other production oriented industries will also be satisfactory, as estimated.

2. Contributions to the National Production

In the year 1991/92, the portion of industrial output was just 6.4 percent of the total national production at factor cost. It is estimated that the contribution of industrial sector will be 8.5 percent of the total national production on the, assumption that, the total national production will increase by 4.8 percent by the end of the Eighth Five Year Plan period.

3. Export Promotion

In the last year of the Eighth Plan goods worth Rs.17,570 million produced from the production oriented industries are estimated to be exported. Among sub-sectors, export from the textile sub_sector will be highest costing Rs. 15,630 million, whereas export from chemical subsector will be lowest worth Rs 790 million.

4. Employment Generation

It is estimated that at the end of the Seventh Plan period about 2,14,000 employment situations were generated in the formal industrial sector, which was due to the industrial production and other programmes launched during that time. These figures are estimated to reach 395,000 with the creation of 181,000 additional employment situations by the last year of the Eighth Plan period. Of the total additional employment situations, the textile subsector is supposed to generate the highest number to the tune of 1,6,266 whereas electrical and electronic sub-sector will have the least opportunities. In the Eighth Plan period there will be 1,765 additional situations opened in electric and electronics sub sector totalling up to 2,765 situations as against 1000 situations available till the fiscal year 1989/90.

5. Demand and supply of Manpower

Although the manpower required for the industrial and mining sectors are to be supplied by the technical training centres, Engineering Institute and various scholarships made available for the purpose, yet the supply of technical manpower is quite low, as against the employment positions for the manpower for administrative and managerial jobs. Basic level manpower is supplied by cottage and small-scale industries development centres, technical educational directorate etc. An industrial manpower and production council is planned to be organised in order to make industrial sector more efficient and productive by conducting activities related to the growth in productivity and the arrangement of able and efficient manpower.

6. Investment

It has been estimated that around Rs 15,000 million on the basis of the constant price of 1991/92 will be invested in industrial and mining sectors within the Eighth Plan period. In this way, total of Rs 22,000 million at current prices will be spent till the end of the plan period.

7. Foreign Investment

The lack of necessary technical knowhow and the deficiency of resources are some of the major problems that hinder the process of economic development from acquiring momentum. Foreign investment should be encouraged to avoid these problems in a systematic and co-ordinated manner. In this respect a liberal, timely, transparent and sustainable policy to attract foreign investment has already been announced after duly realizing the effective role to be played by the foreign investment in the efforts to develop the economy of the country like Nepal. It is believed that after the implementation of this policy the capital, modern technology, managerial and technical skills, access to the international markets, and the development of commercial attributes such as competitive commercial attitudes, awareness for the growth in productivity etc. will be channelled into the country. By the implementation of this policy it is estimated that Rs. 2,430 million of foreign and joint investments will be mobilized to promote and launch about 200 foreign invested capital and technology intensive and export oriented projects with the aim to facilitate the foreign investors with necessary information and opportunities for investment, an investors' forum will also be organized.

8. Projects

Most of the projects now running under the industrial sector will be continued to be operated. Projects relating to Small Scale Business Promotion, export processing, petroleum exploration, TRUGA ceramics promotion operated under foreign assistance will be continued to be operated. Following are the objectives and the programmes of the projects to be introduced during the Eighth Plan period.

a. Small Business' Promotion project

This project, centred in the development of entrepreneurs, and the promotion of small business has an objective to meet the target of providing entrepreneurship development training to 1725 people, training on monitoring system to 1515, training for trainers to 75, instructors, counselling training to 120 consultants and industrial consultancy services to 2600 industries, during this plan period.

b. Industrial Planning and monitoring project

The targets to be achieved under this project during the Eighth Plan are: preparation of managerial study report of 5 industries under industrial management, study of 5 sub sectors under energy management study of privatization, study of the effects of the industrial policies, and launching and supervising of industrial communication system.

c. Export processing Zone Project

Under this project, which is to be established in Kathmandu, preparations such as the acquisition of land, site survey, design layout etc. will be made to establish and operate the export processing zone equipped with all necessary infrastructure.

d. Technology Transfer and Development project

The target under this project for the Eighth Plan is to establish Technology Transfer and Development Centre to collect and publish statistics related to technology development and transfer, and to technically assist in the selection, evaluation and replication of suitable technology.

e. Industrial Survey and Study Project

This project set up under the Department of Industries, for the collection and dissemination of industrial information, will accomplish 10 industrial feasibility studies, publication of 5 preparation and publication of 5 industrial statistics within the plan period.

f. Leather Industry Co-ordination unit

In order to produce skilled manpower within the Eighth Plan period, this unit has the target to provide training in leather goods production and the development of shoe-designing. Besides, it aims to construct a slaughter house.

g. Nepal Standardization Co-ordination unit

The targets set by this project run under Nepal Bureau of Standards and Metrology to be completed within this plan period are: to construct 9 central level laboratory buildings, to link 36 different measuring instruments with the national system, to make grade assessment of 15 industries at the company level, to collect and analyse quality standards of 1570 production samples and to prepare 370 standardization documents.

h. Environmental and Industrial Pollution

In accordance with the system arranged in the new industrialization policy, a separate unit will be set up in the Ministry of Industry to prepare necessary policies, guidelines and standards in order to control industrial pollution and to observe diverse impacts of industrialization on environment. In the same way a process of studying the impacts on environment will be practised prior to permitting the opening of industries. Likewise, Nepal Bureau of Standards and Metrology will prescribe the levels of industrial pollution and the effects of environmental pollution caused by industries will be monitored accordingly.

Mines and Geological projects

During the Eighth Plan, it is targeted to complete 300 line km. reconnaissance seismic survey, 2,000 line km seismic survey, 8,000 sq km gravel survey, 60_000 sq. km aeromagnetic survey, 500 sq.km geological section measurement and 500 petro-geo-chemical sampling. Besides, the programmes like 4000 m. drilling at Kathmandu for natural gas exploration, 2000 sq. mtr and 3000 sq. mtr survey in Dang and Surkhet respectively for coal and 5 thermal spring site exploration in Myagdi, Jomsom and Sindhupalchowk will be launched within the plan period.

1. Geological Survey

With the objective of identifying feasible minerals, targets are set to implement programmes such as geophysical survey of 10,000 sq.km, photogeological survey of 11,000 sq.km and conducting field checks and compilation in the Western, Mid-west and Far-west development regions, engineering geologic_1 studies of 20,000 sq.km. at Kathmandu and Pokhara of Central and Western Development regions and the establishment of 12 seismic stations in Mid Western and Eastern Development Regions.

2. Mineral Exploration

In this sector, activities will be launched all over the country except the Mid-Western Development Region. The activities are: primary gold exploration in 1.000 sq.km throughout the country, gold exploration in 32 sq.km. in Rolpa area, 40000 sq.km. mineral investigation in Ganesh Himal, Jumla, Pantola, Salimar areas, geo-chemical investigation in 16,000 sq.km. in Western and Far Western regions. To explore minerals in Dang, Salyan, Baitadi, Rasuwa and Dhading, the drilling of 1600 metres, mapping of 200 hectares, survey of 2500 sq.km. will be conducted.

3. Feasibility Study

There is an aim to conduct feasibility studies in 5 different places at Kathmandu and Dang for the purpose of establishing industries. In the same way, seven different locations; namely Dhankuta, Dang, Katari, Panauti, Terai areas and Phulchowki, are identified for the promotion of mineral industries.

4. Technical, Logistic and Documentation of Information

The aim of the Eighth Plan towards technical logistic services is to make available chemical, mineralogy, drafting, drilling, analysis, testing, documentation and publication services necessary for mineral exploration and geological surveys. In this regard, services will be made available by regularizing publication and by preparing geological and mineral feasibility maps, in order to make available the scientific, technical and economic statistics to the relevant consumers and the researchers.

Cottage and Small Scale Industries

1. Department of Cottage and Small Scale Industries

The total of 26,000 industries consisting of 25,000 cottage and 1,000 small scale industries will be registered in the Eighth Plan period. Similarly, there is a target to prepare 10 data profiles. The cottage and small scale industries are estimated to provide alternate employment to 300,000 people in the rural areas. More programmes like TRUGA run under this department with foreign assistance will be expanded and launched. Some additional agreements will be made for the extension of the project duration of cottage industry and the ceramic promotion projects targeted for women.

2. Cottage and Small Scale Industries Development Centre

The targets set by this centre are to establish its offices in 48 districts and launch skill development trainings to the total of 14,550 people of 15 days to 1 year courses on various subject areas to 12,000 people and entrepreneurship development trainings in other subjects to 2550 people. In the same way, programmes are set to provide technical assistance to 3,000 industries, to prepare 4500 project programmes, to provide consultancy services to 1500 industries and to supply with the seed capital to 750 workers.

3. Government sector Industries

Physical Targets of the industries run under the government sector for the plan period, are given in Appendix-4. These are only estimated targets. Of these, some of the industrial undertakings will be handed over to the private sector.

Implementation Arrangements

Programmes as above to be launched during the Eighth Plan period will be implemented by the departments, committees and the projects under the Ministry of Industries, but certain other programmes will be run by the Ministry itself. The role of the Ministry will be basically confined to policy-making, co-ordinating and providing directions whereas the functions relating to other aspects will be conducted by the departments concerned. The programmes relating to petroleum exploration, exploration of other minerals and development projects will be conducted by the Department of Mines and Geology, whereas the others concerning cottage and small scale industries will be introduced by the proposed Department of Cottage and Small Scale Industries and Cottage and Small Scale Industry Development Centre. Those projects like Leather Industry Promotion Project, Industrial Planning and Monitoring Project, and Export Processing Zone project will be launched by the Ministry itself, and the Small Business Promotion Project will also be conducted by the Ministry as a separate project. Other foreign assisted projects like ceramics promotion project, TRUGA, Karnali-Bheri Integrated Rural Development project, seismological networks will be implemented by the concerned departments.

Public Corporations and enterprises of industrial sector will be gradually privatized on the basis of productivity and efficiency. Towards this end, necessary process will be initiated by the technical committee formed under the direction of privatization commission. The implementation and the monitoring works of the industrial policies and facilities, for the total development of the industrial sector, will be operated by the Ministry of Industry and the Industrial Promotion Board with the co-operation and coordination of the concerned government agencies. They will also solve the policy and procedural issues cropping up during implementation.

Details of Expenditure

Rs.2,245 million is allocated for the programmes to be conducted under the industrial sector. The detailed description and the regionwise allocations of the above appropriation are shown below:

Expenditure statement for Projects During the Eighth Plan

(in Thousands of Rupees)

Name of the Project	Proposed Estimated			Remarks
	H.M.G.	Foreign	Total	
(A) Government Sector Corporations				
1. Udaypur Cement Factory	121,200	323,300	444,500	Japan

2. Hetauda Cement Factory	40,000		40,000	
3. Himat Cement Company	60,000	200,600	260,000	Germany
4. Royal Drugs Limited	10,000	60,000	70,000	U.N.D.P.
5. Lumbini Sugar Factory	5,000	15,000	20,000	China
6. Nepal Metal Company	5,500		5,500	
7. Nepal Industrial Development corporation	10,000	100,000	110,000	World Bank Germany
	251,700	698,300	950,000	
(B) Development Projects				
1. Nepal standardization Project	15000		15,000	
2. National Meteorological Centre	15000	70,000	85,000	UNDP
3. Small Business Promotion Project	10000	30,000	40,000	Germany
4. Export Processing Zone	60000	200,000	260,000	UNDP
5. Leather Goods Promotion Project	15000		15,000	
6. Industrial Programme and Monitoring Project	15000		15,000	
7. Technology Transfer and Development Programme	15000	50,000	65,000	UNDP
8. Petroleum Exploration Project	50000	150,000	200,000	
9. Natural Gas Programme	45000		45,000	
10. Survey Research and Investigation	17000		17,000	
11. National Seismological Network	30000	70,000	100,000	
12. Laboratory Research	4500		4,500	
13. Plan Implementation	50000		50,000	
14. Training for Rural Gainful Activities (Truga, project)	10000	30,000	40,000	
15. Ceramics	3,000	10,000	10,000	
16. Cottage Programmes for Women	500	5,000	5,500	
17. Karnali Bheri Integrated Rural Development Project	6,000	7,000	13,000	
18. Dhading Development Programme	3,500		3,500	
19. Training Programme of Cottage and Rural Industry Departments	100,000		100,000	
20. District Level programmes of Cottage Industry Department (27 Districts)	20,250		20,250	
21. District Level Programmes of Cottage Industry Committee (48 Districts)	36,000		36,000	
22. Miscellaneous	152,250		152,250	
Total	673,000	622,000	1,295,000	
Grand Total	924,700	1,320,300	2,245,000	

Appendix-1

Indicative Production Programme of Production Oriented Industries by the Last Year of the Eighth Plan

Subsector and Industries	Units	Production Target		Estimated Growth Rate	
		H.M.G.	1989/90 (Base Year)		1996/97
1. Foods, Beverages and Tobacco Subsector					
Processed Milk	Kilolitre		26,000	42000	8.32
Processed Fruits	M.Ton		2,000	5000	16.50
Unprocessed Oil and Vegetable	Kilolitre		15,300	21000	5.42
Processed Oil	Thousand		1,612	2300	6.10
Processed Food (Rice and Wheat)	Metric Ton				
Noodles	..		1,647	7000	27.27
Biscuits	..		4,430	9000	12.54
Sugar	..		31,927	130000	26.37
Spices	..			20000	
Tea	..		1,393	5000	23.74
Animal/Bird Feed	..		11,543	45000	25.45
Alcohol (Liquor)	Kilolitre				
Modern	..		2,460	6000	16.02
Local	..			12000	
Beer	..		6,838	13000	11.30
Soft Drinks	..		11,520	32000	18.56
Cigarettes (Local)	Sticks (10 lakhs)		6,137	11000	10.21
2. Textile and Garment Subsector					
Cotton Yarn	Metric Tons			7000	
Cloth cotton	Metres (10 lakhs)		17.29	75	27.71
Cloth Synthetic	..		15.53	60	25.26
Jute Goods	Metric		74.73		-19.73
Readymade Garments	Rs.10 lakhs		1,410	8200	34.1
Carpet	Thousand sq.mtr		1,152	3000	17.29
Processed Leather Wet blue	10 lakh sq.ft		7.11	8.8	3.62
Crushed Leather	..			6.0	
Finished Leather	..			5.2	
Shoe Upper	Thousand Pairs			300	
Shoe Leather	..		744	1100	6.73
Canvas Shoe	..			3300	
PVC Slipper	..			10400	
3. Chemical Subsector					
Paper	M.Tons		5,321	20000	24.61
Drugs	Rs.10 lakhs		52	400	40.5
Soap	M.Tons		11,943	31000	17.23
Detergent Powder	..		489	1000	12.66
Paints	Kilolitre		1,533	2200	10.13
Processed Adhesive	..			28	
Rosin	M.Tons		166	9000	94.45
Turpentine	Kilolitre		30	2500	109
Automobile Tyres	Set			80000	
Polythene Pipe	M.Ton		1,698	5300	17.66

Plastic Goods	„	2,829	5700	12.38
Bricks (machine)	10 lakh pieces		250	
Bricks (Chimney Kiln)	„		900	
Cement	M.Tons	101,179	656000	33.2
D.B. Magnesite	„		50000	
4. Mechanical Engineering Subsector				
Iron and Steel Basic Industry	Rs.10 lakhs	36,339	6597	
Cutlery, Hand tools and Hardware	M.Tons		500	
Metallic Furniture and Fixture			1025	
Structure Metal Products			2355	
Non-Machinery Fabricated Metal Products			1950	
Professional and Scientific Equipment		2		
5. Electrical and Electronic Subsector				
Industrial Machinery	In Rs. 10 lakhs		1001	
Communications	„		1382	
Appliances	„		356	
battery	„		393	
Component	„		3060	

Appendix-2
Estimated Employment That will be created in Industry and Mines Sector by the Last Year of Eighth Plan

Subsector	Total Employing Institutions		Additional Employment 1989/90 to 1996/97	Increase Rate
	1989/90	1996/97		
Food, Beverages and Tobacco	66000	91,245	25245	
Textile and Garments	80000	176,170	96170	
Chemical	62000	116,920	54920	
Mechanical Engineering	5000	7,505	2505	
Electrical and Electronic	1000	2,765	1765	
Total	214000	395,000	181000	13.05

Appendix-3
Investment Projection in Industry and Mines Sector in Eighth Plan Period
In millions of Rupees (at 1991/92 prices)

subsector and Production	Estimated Investment 2049/50-053/54
Food, Beverages and Tobacco Sub-sector	2791.00
Milk	30.00
Processed Fruit and Juice	32.00
Processed Mustard oil	50.00
Biscuit and Noodles	80.00
Sugar	1271.00
Spices Processing	15.00
Tea Processing	110.00
Animal/Bird Feed	9.00
Liquor	177.00
Beer	74.00
Soft Drinks	35.00
Cigarette	840.00
Rice Mill Modernization	68.00
Cloth and Textile Sub-sector	3954.00
Cloth and Fabrics	2764.00
Jute Goods	250.00
Readymade Garments	390.00
Carpet	365.00
Processed Leather	85.00
Footwear	100.00
Chemical Sub-sector	7552.00
Paper	780.00
Drugs	390.00
Soap and Detergent	250.00
Chemical Substances	24.00
Plastic substances	8.00
Construction Bricks and Tiles	260.00
Cement	5840.00
Mechanical and Engineering Sub-sector	448.00
Iron and Steel Basic Industry	343.00
Cutlery, Handtools and Hardware	4.00
Metallic Furniture, Fixture	6.00
Structural Metal Products	74.00
Non-machinery fabricated Metal Goods	15.00
Scientific Equipment	6.00
Electrical and Electronic sub-sector	180.00
Industrial Machinery	75.00
Communication Equipment	30.00
Appliance	3.00
Battery	30.00
Components	42.00
Total	14925.00
Percent	8.60

Appendix-4
Physical Targets of Industries run in the Government Sector For the Eighth Plan

	Industry and Programme	Target
1.	Himal Cement Factory	444,639 M. Tonne
2.	Hetauda Cement Factory	1,027,000 M. Tonne
3.	Udaypur Cement Factor	1,100,000 M. Tonne
4.	Bansbari Leather and Shoe Factory**	17.4 million sq. ft. Redied leather, 15,5 million pair shoes and Leather goods worth Rs.15.5 million
5.	Birgunj Sugar Factory	97,500 M. Tonne Sugar 6.75 m. million liter spirit
6.	Lumbini Sugar Factory	61,750 m. Tonne Sugar, 5.2 million litre rectified spirit
7.	Brick Tile Factory Harisiddhi**	87.5 million bricks, 3 million roofing tile 1.5 million flooring tile
8.	Bhaktapur Brick Factory*	90 million bricks
9.	Janakpur Cigarette Factory	18,000 million sticks cigarette
10.	Hetauda Textile Mills	31 million metre cloth
11.	Balaju Textile Mills	5.3 million metre cloth
12.	Bhrikuti Paper Factory**	22,575 m. tonne paper
13.	Royal Drugs Limited	Rs.985 million worth of Medicines
14.	Nepal Cast-Iron Industry	1,950 m. tonne cast iron and steel goods
15.	Nepal Orind Magnesite Pvt. Ltd.	50,000 M.tonne D.D.M., 10,000 M. Tonne talc Powder Production
16.	Nepal Metal Company	3,60,000 M. tonne crude zinc 64,800 M. tonne zinc concentrate 7,200 M. tonne lead concentrate
17.	Nepal Industrial Development corporation	Rs.2,000 million Investment Rs.2,160 million return Rs.4,000 million merchant Banking
18.	Tobacco Development Company Ltd	16,000 M. tonne non-redried tobacco, purchase of 16,604 M. tonne tobacco, sale of 14,604 M. tonne tobacco upon redrying and packing, Training for 375 farmers.
19.	Hide Collection and Development Corporation Limited	collection and sale of 1,245,000 pcs hide.

20.	Cottage and Handicrafts Sales	1. supplying necessary machine, tools and raw materials to industries 2. Buying and selling of products
21.	Raghupati Jute Mills	Production of 35 thousand m.tonne jute goods
22.	Economic services centre	Project Study, Technical Evaluation and Consultancy Services
23.	Industrial Sector Management Ltd.	Selling of land to respective industrialists in industrial areas; privatization and establishing industrial districts at new places

* Some of these industries will be privatized under privatization policy, so the physical targets may vary.

** The targets are mere estimates. Necessary works are underway for their privatization.

Trade

In the early stage of economic development Nepal's trade was limited to that with India and Tibet alone. During that period, the major exports from Nepal comprised rice, timber, herbs and medicinal plants and handicrafts and the major imported items were cloth, salt, medicines and kerosene oil. Since the development process was in its infancy, people's needs of the daily necessity foods were limited and the construction and development works had not yet gained momentum. As a result, the list of goods to be imported was also quite limited.

With the beginning of systematic development efforts, the volume of imports into Nepal also increased. Therefore, in order to promote exports an exporter's exchange entitlement scheme was introduced in 1961. Under this scheme, raw jute was exported to a third country for the first time. Although some trade diversification in terms of countries was achieved, no substantial progress was made in the export trade from the above system which remained operational for over one and a half decades. The main reasons behind this were the inability to identify new exportable items and the lack of positive measures towards increasing the production of goods already being exported. With the continued increase in imports as compared to exports, there also appeared some distortions in the system itself.

With the objective of promoting exports, a system of dual foreign exchange rates was introduced in 1977. Under this system, the American dollar as per the first rate was deemed equivalent to Rs. 12 and as per the second rate Rs. 16. Although there was now a difference of 25 percent between the two rates, the export trade instead of introducing new exportable items thrived on export of goods such as raw jute, leather, pulses and rice traditionally exported to neighbouring countries. This even gave rise to trade distortions by encouraging the import of non-Nepali products for export to a third country. To do away with such distortions some changes were brought about in the dual foreign exchange rates. Under the changed system, while the first rate was left untouched, in the second rate the exchange rate of the Nepalese rupee was brought down from Rs 16 to the U.S. dollar to Rs. 14. However, as the change in the exchange rate earned comparatively less profit to exporters than in the past, no new items could find an entry into the export trade. As the second rate was applicable to trade with countries other than India, there thrived the trend of exporting raw jute/leather, pulses and rice to third countries. The reasons behind the distortions in the system and failure to diversify the export trade in terms of exportable commodities in spite of the facility of dual exchange rate were the absence of programmes that would establish proper linkage between producers and exporters, the lack of efficiency and entrepreneurship in the trade sector and also the prevalence of inward looking economy in the neighbouring countries. Therefore, the dual rate system was abolished and a single exchange rate was introduced in 1981.

As the change from a dual exchange rate to a single rate system was comparatively less profitable to the exporters and as no concrete steps were taken in the country towards increasing the production for export, the export trade remained negligible during that period. Although the government introduced a special economic programme in F.Y.1981/82, the balance of payments situation recorded a negative trend. The destabilization of the production of jute, a traditionally exported item of Nepal, due to changes in international market prices, the creation of a situation entailing the import of food grains for domestic consumption, the discontinuation of the export of timber due to excessive deforestation, the lack of development of any new exportable items and a limited export of leather, carpets, readymade garments and handicrafts led to the increased trade imbalance.

In this perspective, a system was introduced to allow 10 percent cash subsidy on the FOB price of the exported goods to promote exports. Under the nine-point programme, the Export Commodity Development and Export Promotion Council was constituted under the chairmanship of the Prime Minister to undertake timely and appropriate steps to promote exports upon reviewing the development situation of exportable goods and the targets, as well as the programme and progress of export promotion activities. Under this programme, several activities were undertaken such as the facility of foreign currency exchange to industrial houses upto 15 percent of their foreign currency earnings from exports in order to import raw materials, auxiliary materials and capital goods required for the same industry, a token export tax of only one percent on exports to third countries and a revenue and sales tax refund on raw materials of the products exported overseas commensurate with the export quantity even to the industries previously specified as not eligible for that facility. Similarly, provisions were made for pre-shipment loan to exporters for the collection, processing and actual export of exportable items against the collateral of fixed assets or the letter of credit of the importer. It was also arranged that Nepal Industrial Development Corporation should make an investment of minimum 10 percent of its total investment outlay in export oriented industries for their promotion and development. And, separate banking units were to be established by commercial banks to deal with exports in all major export areas of the Kingdom. Although these provisions were appropriate in the context of the then prevailing economy, no reduction is noticed in the rate of increase in trade deficit due to extremely weak implementation in aspects.

In the same context, the imposition of excessive restrictions on import for reducing the trade deficit led to

situation where the necessary commodities also could not be imported in time due to a great difference between the real value and market value of import licence, which reduced the opportunities of profit to real importers. Furthermore, although the system of cash subsidy on exports to third countries showed an increase in the trade with third countries, it could not make any significant contribution to the promotion of export trade.

Progress during the Seventh Plan (1985-1990)

In the first year of the Seventh Plan, the Nepalese currency was devalued by 14.7 percent under the Structural Adjustment Programme in December, 1985. A system was then introduced in 1986 which permitted the export of all goods produced in Nepal without any licence except for the items with total ban and quantitative restrictions. Similarly, to facilitate the import of essential goods, arrangements were made for import upon the classification of goods through an auction system. In order to promote the export import trade, warehouses were constructed as and where necessary in the border customs areas.

However, as regards the increase in trade deficit, it continued to grow unabated in the Seventh Plan. While the first year of the plan showed a trade deficit of Rs. 6,263.2 million, the deficit amount reached Rs. 13,166 million in the final year.

In the last two years of the plan, the failure to sign new treaties upon the expiry of the Nepal-India Trade, Transit Treaties and an Agreement to Control Unauthorised Trade also led to the increase in foreign trade deficit.

In order to diversify the commodities to third countries which were traditionally exported, to India, a system of cash subsidy of 5 to 35 percent on export was introduced. However, this system' also could not promote the export of commodities, with a few exceptions to the third countries. During this period, the import of 23 commodities along with a few essential commodities was permitted under the Open General Licence System. Thus, the difficulties in the export of Nepalese products to India, on the one hand, and simplified system of import from third countries, on the other, led to a continued steady increase in trade deficit during this period.

During the Seventh Plan period, there had been some structural changes in the foreign trade of Nepal both in terms of country and commodity. In view of the countrywise diversification of trade during the plan period, the trade with India continued to decline comparatively whereas with other countries it showed an increase. In respect of the volume of export, while the share of the traditional goods decreased, the processed items such as carpets and readymade garments gained prominence. Among these, there was a large percentage increase in the export of woollen carpets, readymade garments, leather and handicraft items (including silver jewellery). However, not much diversification was attained in their export market.

Although the import trade was increasing day by day, the import of primary products including raw materials amounted to only 28.7 percent of the total import of F.Y. 1989/90. The remaining 71.3 percent consisted of the import of processed or consumer goods. There was a considerable change in the composition of import in the Seventh Plan. With a sharp decline in the import from India, the third country import reached to 70 percent. While the traditional import of development and construction materials in addition to consumer goods from India reduced, they were now being imported from third countries. However, although the import declined, the trade deficit with India went on increasing as the value and the volume of import had multiplied and there had been a reduction in the export to India.

The progress of the programmes conducted at the institutional level during the Seventh Plan are as follows:

Trade Promotion Centre

The Trade Promotion Centre, having identified exportable items, has undertaken studies of the various processes and stages from production to the export level of some of the commodities such as tea, large cardamom, handicrafts, silver jewellery, silk, vegetable needs, rosin and turpentine, orchids and horticultural saplings etc. Similarly, studies have been conducted with a view to solving the problems noticed in the processing of large cardamom and the production of ginger. As regards the exploration of market overseas for the export of potentially exportable items, studies on market feasibility and the export situation of niger seeds to Western Europe, of boulders and gravel to India and Bangladesh, of silver jewellery, large cardamom, dried ginger and some essential oils to the U.S.A. and E.E.C. countries were conducted.

Studies were carried out with regard to the development of and market extension for readymade garments, leather and leather goods, and silver jewellery. With a view to promoting export to Tibet, studies were undertaken on the trade situation and problems of the potential Nepalese export items to Tibet.

During this period Nepal participated in important trade fairs and exhibitions. Workshop seminars and trainings were organised on various subjects all over the country in order to stir up the export sector and exporters by acquainting them with policy matters pertaining to export and providing information on export mechanism, international market and trade. With the assistance of EEC the Stabex project was initiated at the central level. Through this project financial assistance was made available to leather industries as a compensation for the loss

that had occurred to them in the course of exporting leather and leather goods to European countries.

Export Service Centre

The Export Service Centre under the patronage of Trade Promotion Centre undertook the tasks of the preparation of a product catalogue, conduction of workshop seminars, collection and research of designs, and the establishment of an exhibition centre etc. in respect of publicity and extension work during the plan period. Some other activities such as training (dyeing and weaving), market testing of products and the preparation of different shades of colours were also completed.

Nepal Transit and Warehousing company Limited

A warehouse of 2000 m. ton capacity is under construction at the border town of Biratnagar, initiated during the Seventh Plan, for the storage of goods in transit. Similarly, having acquired some rental land, a container yard of 226,992 sq. meters in the Haldiya dock zone and an office building and staff quarters in the Haldiya township have been built. In order to strengthen the transit information centre, some work was undertaken with regard to the installation of the computer facility and the means of communication such as telex. The task of collecting transit information thus seemed to be in progress.

Progress during the Fiscal Year 1990/91 and 1991/92

Despite the trade impasse with India following the expiry of Nepal-India Trade, Transit Treaty and Agreement to Control Unauthorised Trade on March 23, 1989, arrangements were made for the reinstatement of status quo ante in trade relations until the signing of a new treaty.

Furthermore, against the previous provision (during the treaty period of exemption from basic customs' duty and quantitative restriction to Nepalese products-consisting of 80 percent Nepalese and Indian raw materials for entry into India, a decision was reached to open the Indian market to Nepalese products with 65 percent Nepalese or Nepalese and Indian components. Besides, there used to be a total exemption from the quantitative restrictions or to the extent of only 50 percent of the customs duty as levied on.

the import from most favoured nations in unusual circumstances to the Nepalese industrial products consisting of Nepalese or Nepalese and Indian raw materials or services amounting to 50 percent of the factory cost upon assessing' them separately. Now, it has been agreed that India would provide the above mentioned faculties to Nepalese product_ consisting of 40 percent Nepalese or Nepalese and Indian raw materials and services.

Subsequent to the formation of the elected government, three separate treaties on trade, transit and unauthorised trade have been signed between Nepal and India. The accessibility of Indian market to Nepalese products has been made convenient as under the new agreement the exemption from - basic customs duty and quantitative restriction has been granted to Nepalese products consisting of 55 percent Nepalese or Nepalese and Indian raw materials. Similarly, the provisions that a Performa once approved would remain valid for four years and the investigation with regard to a Performa would be completed within four months are expected to go a long way in helping the exporter to increase their export to India.

During this period, a system was introduced to return to the exporters the premium previously charged on the import of wool used by them for manufacturing the. exported carpets. Similarly, improvements were made upon review in the auction system. In order to cut down the transportation cost in the course of export and import of goods, the documentation procedures at Calcutta Port were simplified and a warehouse exclusively for transit purpose was constructed in the customs area at Biratnagar. In the course of facilitating counselling and information services as requested by exporters and importers, the use of computers was introduced in these services. As an alternative to the 'personal belongings' import system, a separate licence auction system was introduced for the import of merchandise by small traders. Similarly, the licence system for the export of readymade garments was revoked. The amount of money allowed for the import of goods was also raised in view of the possible fluctuation in the exchange rates and the supply and demand of imported goods.

As the Nepalese economy is closely linked with the Indian economy, the changes in the latter naturally have an impact on the former. Thus, in consequence of the devaluation of the Indian currency against the foreign currency, Nepal also devalued its currency by 22.2 percent in the foreign currency exchange rates in F.Y. 1991/92.

Similarly, arrangements have been made for granting permission to individuals for the import of goods for personal use upon the receipt of an application to that effect a the Department of Commerce along with the evidence of having opened an account in convertible foreign currency in any commercial bank in the Kingdom of Nepal and having sold a certain amount to Nepal Rashtra Bank at the approved rate. The right has been granted to import any goods incorporated in the Open Genera Licence system to the holder of such foreign currency or

any other person through the transfer of authority.

Compared to the F.Y. 1989/90 figures, the export and import trade increased by 45.2 and 31.5 percent in 1990/91 reaching Rs. 7603.7 million and Rs. 24,197.9 million respectively. According to these figures, the export trade amounted to 28.4 percent of import in 1989/90, which increased to 31.4 percent in 1990/91. This increase in export directly contributed to decrease the trade deficit. Whereas export and import in the first nine months of 1990/91 increased by 45.4 percent and 28.6 percent respectively, they recorded increase of 79.9 and 38.4 percentages in the same period of time in 1991/92 reaching Rs. 9,880 million and Rs. 23,365.7 million respectively. Thus, an accelerated increase in export retarded the growth in trade deficit. However, even during this period, the trade deficit did continue showing a rising trend on the whole. While the trade deficit in 1990/91 stood at Rs. 16,607.6 million, it is estimated to have reached Rs. 19,247.4 million in 1991/92. However, the accelerated increase in export and proper import management have contributed to slacken the 'pace of increase in trade deficit. Compared to the final year, of the Seventh Plan the trade deficit in 1990/91 increased by 26 percent whereas against the same year the deficit in 1991/92 is expected to have increased by 16 percent only.

The policies adopted in the trade sector in the past could not make a direct positive impact on the extension of trade and economic growth but created further distortions and problems. With the objective of doing away with these lapses in policy matters and in view of the emergent openness in the world economy, His Majesty's Government has introduced partial convertibility of the Nepalese currency in current account in the course of transforming the Nepalese economy to an open, transparent and market-oriented one. The initiative shown by the neighbouring countries to adopt market oriented economy and the economic development achieved by them also necessitated this step. In keeping with this new system, 35 percent of the foreign currency earnings from any trade or service need to be deposited with the Nepal Rashtira Bank at the government rate whereas the remaining 65 percent can be sold to any commercial bank at an 'exchange rate determined by the market system. At the same time, it allows a foreign currency earner to open a foreign currency account by depositing 20 percent of his earnings in foreign currency for the promotion of trade and Tourism. This policy measure has been undertaken by the elected government with the objective of providing a new dimension to the structure and direction of Nepalese economy in the perspective of developing trade into an efficient and effective sector and adopting a healthy and sustainable economic growth through policy reforms in the economy. This system has relaxed the conventional restrictions on export and import trade. A study of the preliminary indicators of the first three months following the implementation of the 'above policy indicates that while there is great like, likelihood of export to have gone up, the foreign currency reserve has definitely increased. A positive impact of this development has been noticed in the decline of the trade deficit. In this context, a new trade policy has been promulgated with a view to adopting an open and liberal policy upon reviewing the prevalent export and import policies.

Existing Problems

1. There has been a tremendous increase in trade deficit. In the F.Y. 1991/92 alone, Nepal, as it appears, will have to bear a trade deficit of Rs. 19,000 million.
2. The export base of Nepal has narrowed down due to the decline in the production and surplus quantities of traditional products.
3. There has been a predominance of a limited number of products (Woolen carpets, readymade garments, handicrafts and leather) in export to a limited market. Among these products, too, while the quality standards of woolen carpets have not ameliorated and at the same time the industrial base of readymade garments has not acquired stability. Due to the lack of productwise and countrywise diversification of these items, problems have cropped up with regard to their sustainability.
4. Although the deficit in trade with third countries is on the decline, the trade deficit with India has been rising due to an excessive increase in import and stagnation in export.
5. Potentially exportable products, although identified to a certain extent have not yet been efficiently selected and developed.
6. The erroneous policies adopted in the past have hindered the healthy development of trade. While this has caused only a limited growth in export on the one hand, the lack of proper import management, on the other, has led to various distortions and anomalies in the economy.
7. There is a lack of coordination between the production sector and the trade sector. At the same time many products with export potential have not found an entry into the export sector due to the lack of transport facilities and- other basic infrastructures.
8. Proper backward and forward linkages are not yet fully established for the promotion of sustainable export trade.

Background of the Eighth Plan

The trade sector has an extremely significant role in accelerating the growth rate of economy. The inward or outward looking policies and programmes adopted with reference to international trade promotion clearly reflect the philosophy of development of a country and the contribution of its trade sector in the economy.

The failure of certain nations to achieve the desired pace of development due to their inward looking policies has been clearly noticed. In Nepal also, the economic policies of the past nearly stagnated the pace of development and the inward looking policies adopted in the trade sector led to the increase in trade deficit. Consequently, the trade sector could not make desirable contribution to the economy due to the lack of appropriate policies and their satisfactory implementation as well as the inadequacy of production and diversification of exportable commodities.

As the extensive changes in the structure and outlook of the world economy and the commensurate developments that have nearly established the indispensability of the market-oriented economy and outward looking policies, the neighbouring countries, too, are heading towards competitive, market-oriented economy. In this context, it has become incumbent upon Nepal also to forsake protectionism and adopt market oriented economy. The fact that the countries with open, competitive and market-oriented economies have achieved greater acceleration in the pace of development than the countries with control-oriented economies has been clearly demonstrated in the international scenario. In keeping with the formation of the government accountable to the people in Nepal and its commitment to eliminating the negative influences of the erroneous policies of the past in the economy, commensurate programmes will be implemented during the Eighth Plan to promote trade through the medium of competitive, market-oriented economy. The Eighth Plan aims at making the trade sector fully competitive and market oriented within the plan period.

The efforts of the policies and programmes of the Eighth Plan alone will not suffice to attain the development of the trade sector. Therefore, in view of the experience of the past that any trade programmes introduced without reconciling them with the productive sector of the nation as a whole can not have a positive impact on trade, the programmes in the Eighth Plan have been formulated with a collective approach. In the course of making the foreign trade more open, transparent and simplified, the trade sector has been reconciled with the taxation policy, revenue policy, the policies pertaining to public enterprises and the policy of privatization. Similarly, a policy has been adopted to make rational efforts for the growth of production of exportable commodities only upon establishing direct interrelationships with other production sectors of the economy such as industry, agriculture and forestry.

Against this background, certain corrective policy measures have already been taken to provide an appropriate direction to the trade sector even before the implementation of the Eighth Plan and a compatible trade policy also has been implemented.

Objectives

1. To achieve robust and dynamic growth in the trade sector so that it can directly contribute to the national economy through the creation of more income and employment opportunities.
2. To attain a favourable balance of payment situation by increasing exports and thus earn more foreign exchange.
3. To diversify international trade by promoting backward linkages for attaining reliability and sustainability in the export trade.
4. To expand trade making it sustainable so that the trade deficit can be minimized by gradually reconciling imports with exports.
5. To bring about qualitative and-quantitative enhancement in the supply of consumer goods for domestic consumption through a proper market system.
6. To expand employment-oriented trade in harmony with other economic sectors.
7. To make transit facilities efficient and cost effective in order to channel optimum benefit from foreign trade to the economy.

Policies

1. During the plan period, the trade sector will be made more liberal, complete and market oriented in view of its role as a major contributing sector for the achievement of a higher rate of growth in the economy.
2. The private sector will be inspired to assume a major role in the trade sector, confining the role of the government to that of a catalyst and a facilitator.
3. Liberal and dynamic trade policies will be adopted to attain a favourable balance of payments situation by

increasing export for higher foreign exchange earnings and by making the domestic supply system more qualitative and practical from the economic point of view.

4. A higher rate of growth will be achieved in the standard quality production of goods and services for domestic consumption as well as export by ensuring the proper and efficient utilization of economic resources.
5. Special efforts will be made to increase productwise and countrywise trade.
6. Efforts will be made to promote the, interrelationships, among industry, trade and other economic sectors in order to boost national production for export promotion as well as domestic supply. Efforts will also be made to introduce and diffuse modern management/and production techniques so as to increase the production of exportable commodities through the introduction and development of new products and through the improvement in the-quality of existing exportable. Liberal procedural steps will be undertaken to attract foreign investment.
7. The State Trading Organizations being run in the governmental sector will be gradually privatized in commensurate with the performance and development of the private sector.
8. Appropriate monetary and fiscal policies will be adopted and necessary changes will be made to the foreign exchange policy to make' the Nepalese currency fully convertible for the above mentioned activities in the trade and service sectors. In addition) fundamental reforms will be effected in the administrative procedures so as to make them simpler, more transparent and dynamic.
9. The taxation system will be simplified and improved as necessary in order to maintain the spirit of competition in the trade sector.
10. Emphasis will be laid on the development of necessary institutional facilities and information network including the improvement in quality standards and monitoring system for the promotion of foreign trade.
11. For the promotion of international trade, the existing treaties and agreements with different countries and international agencies will be effectively implemented and more such treaties and agreements will be signed as necessary.
12. Necessary promotional programmes will be undertaken in order to augment the trade with neighbouring countries (India and the Tibetan autonomous region of China) and other SAARC nations.
13. Proper import management will be organized so as to create a competitive industrial and commercial atmosphere by utilizing import as a means of export promotion and development and to ensure the smooth supply of essential domestic commodities through the efficient mobilization of available resources from the economic point of view_ In this regard, with the objective of promoting competitive production, quantitative restriction on imports will be gradually phased out and replaced by tariff structures. Efforts will be made to gradually reconcile imports with exports.
14. Various efforts will be made to improve the transportation system and to construct necessary warehousing facilities in order to gradually reduce the transport cost.

In keeping with the above policies, various necessary arrangements will be made as follows:

a. Monetary and Exchange Management

1. Arrangements have been made for an exporter to sell to commercial banks a specified percentage of his convertible foreign currency earnings from the export of goods and services at an exchange rate fixed by the market system and the remaining amount to Nepal Rashtra Bank at the government rate. This has been introduced as a preparatory -measure for granting full convertibility to Nepalese currency in the trade and service sectors in order to create a competitive commercial atmosphere by reconciling exports with imports. Quantitative restriction and licensing system have been waived for the import of raw materials required by export-oriented and import-substituting industries. However, the foreign exchange required for the import of these materials will have to be obtained from commercial banks at the rate fixed by the market system. For trade promotion activities, an exporter is now permitted to open a foreign currency account with a certain percentage of his foreign currency-earnings.
2. Necessary arrangements will be made to make the Nepalese currency fully convertible in current account during the Eighth Plan period. In this regard, gradually increasing the present percentage of partial convertibility of the Nepalese currency, the entire foreign currency transaction for commercial and service activities including the business of the government will eventually be conducted at the market rate. Thus, once the full convertibility is introduced, all foreign exchange transactions will be-conducted by the market.

3. Pre and post-export credit facility will be made available on a priority basis in a convenient manner.

b. Fiscal (Tax and Revenue) Management

1. The income from export is exempted from taxation and a tax holiday is also granted to the earnings from the export undertaken/on the basis of a letter of credit or any agreed banking document from India.
2. No exportable commodity in normal circumstances will be subjected to- any taxes other than service charges. However, revenue structures will be developed for regulating the export of essential commodities required for the country.
3. A duty drawback scheme will be effectively implemented for the import of raw materials and intermediate goods required for the production of exportable commodities. In this context, regarding the import of raw materials, a total waiver or the storage facility in a bonded warehouse will be granted depending on the need and the nature of the import. The bonded warehouse facilities will be extended and improved commensurate with the nature of materials to be exported.
4. An Export Processing Zone will be established for the promotion of export. No taxes or duties will be levied on the raw materials or subordinate raw materials to be used by industries established in the Zone. Similarly, any other industry exporting more than 90 percent of its products also will be entitled to the facilities enjoyed by the industries of the Export Processing Zone.
5. The existing quantitative restriction on import will be gradually replaced by tariff structures and they will be so adjusted that they do not affect the export-oriented and economically viable import substituting industries.

c. Licensing Arrangement

1. There will be a restriction on the export of archaeological and religious items and those affecting the environment. A quantitative restriction may also be imposed, if required, on the export of any foodgrains in short supply in the country but such restriction on these commodities, too, will be gradually replaced for the export of any other items
2. In the course of liberalising the country import trade while the import of some commodities has been restricted and a few others require a licence to be obtained under the, auction system, the import of remaining goods has been left open. Under this arrangement, the import of industrial machinery- and services including the raw materials and consumables does not require any licence. This system will remain in force until such time that there exists partial convertibility. Upon the introduction of full convertibility of the Nepalese currency within this plan period, the licence by auction system for goods to be imported for commercial purposes also will be cancelled and the entire imports will be left open.

d. Procedural Management

1. The export valuation system will be gradually phased-out after the introduction of the full convertibility of the Nepalese currency.
2. The Nepalese diplomatic missions overseas will be mobilised for the promotion of export and trade agencies will be opened and developed on an institutional basis depending upon necessity.
3. No quantitative restrictions will be imposed on the exportable items to be carried out by tourists visiting Nepal.
4. Necessary amendments or reforms compatible with the present policies will be made to the relevant acts and regulations relating to export and import trade. The procedures and documents connected with export and import will be made simpler, shorter and more transparent. Administrative procedures will be organised accordingly.
5. With the objective of promoting export on the basis of the position and development of export activities, every year a pilot export plan and programme will be formulated with the co-operation of the private sector and export will be boosted accordingly.
6. Arrangement will be made for uninterrupted monitoring and supervision in order to efficiently conduct the export and import activities and to prevent the emergence of any distortions in this sector and any possible trade diversion.
7. The import valuation system will be made more relevant with necessary improvements. The basic structure required for this purpose will be formulated.

e. Transit, warehousing and Transportation Management

1. Studies of waterways and airways as alternative routes in addition to the existing ones will be conducted

with a view to minimizing the transit and transportation costs.

2. Arrangement of air cargo at concessional rates for foreign trade will be explored.
3. Efforts will be made to have an appropriate place in Nepal linked with Calcutta Port with a broad gauge line in order to make the overseas export and import trade simpler and more cost effective.
4. A plan will be formulated and put into implementation to operate a container freight station to effectively extend the multimodal container transportation facility.
5. A two-way utilization of the means of transport will be achieved by reconciling export with import in order to cut down the transportation cost.
6. In addition to the construction of warehouses equipped with physical facilities in the border customs area for transit purposes, other basic facilities also will be built and consolidated.
7. The presently operating, clearing, forwarding and undertaking service will be consolidated as an institution and mobilised more effectively to minimize the transit cost.

f. Training and Manpower Management

For the development of manpower required for trade and transit activities, training programmes will be developed and implemented in association with existing training institutes.

g. other Arrangements

1. For the promotion of export market for potential products, efforts will be made to mobilise the private sector and government sector to establish relations with foreign companies jointly or separately and conduct various programmes with joint investment relating to export market promotion.
2. Any producer selling his products in foreign currency to any project operating under a bilateral or multilateral assistance programme or selling his finished or semi processed products to the Export Processing Zone will be entitled to all facilities on his sale as on export. While the duty drawback scheme will be applicable to such sale, the income thus-generated will be exempted from income tax. Moreover, the foreign exchange earned in this manner can be disposed at the market rate upon making a specified percentage of the earnings available to Nepal Rashtra Bank at the government rate.
3. A conducive atmosphere will be created for proper management of the supply and distribution of imported goods and those produced within the country. In this connection, no restriction will be imposed on the transfer of such products from one place to the other for domestic trade. This provision will be applicable to the transfer of exportable commodities also.
4. The business firm registration and renewal procedures will be simplified.

h. organisational Management

1. A Board of Trade will be constituted under the chairmanship of the Minister "of Commerce with representatives from the concerned agencies of HMG and the private sector in order to efficiently organise the foreign trade, to solve the problems that may arise in the course of implementing the approved policies, to establish coordination among various agencies and to make necessary reforms timely and make commensurate decisions.
2. A Foreign Trade Policy and Research Institute will be established -as a technical wing of the Ministry of Commerce. The institute will provide necessary services to the Board of Trade Secretariat for the efficient conduction of the board activities, in addition to undertaking research, studies, training and identification and development of new products for expanding and strengthening the country's foreign trade.
3. The existing Trade Promotion Centre will be reconstituted as Nepal Trade Promotion Organization to be jointly participated-by government and private sectors with a major share of representation from the private sector in order to facilitate the exchange of services and information in export promotion and import management and undertake other promotional activities. This organization will function on commercial principles.

Targets and Programmes

During the Eighth, Plan period-the average growth rate in export is targeted to reach 19.1 percent whereas the import growth rate is estimated to be at an average of 11.7 percent only. Accordingly, the trade deficit of 15.2 percent of GDP in the first year of the plan is expected to record a decline reaching .13.5 percent in the final year of the plan. Thus, the average-rate of increase in the trade deficit during the plan period is estimated to be 4.1 percent.

In keeping with the objective of continuously increasing the export of major commodities being exported at

present, the export values of woolen carpets, readymade garments, pulses, leather and leather goods and handicrafts' (including silver and gold jewellery) are estimated to reach Rs. 18,120 million, Rs 3,840 million, Rs. 900 million, Rs 460 million and 280 million respectively in the final year of the plan compared to the corresponding export figures of Rs. 6,430 million, Rs. 2,940 million, Rs:- 860 million, Rs. 240 million and Rs. 120 million in the F. Y; 1991/92* (base year). Thus, the annual export growth rates of those products are estimated to be 23.0 percent, 5.4 percent, 1.0 percent, 13.7 percent and 19.5 percent respectively.

In the Eighth Plan, the trade sector programmes are formulated on the premise that the government will act as a coordinator and facilitator and provide necessary infrastructure and support while the private sector is entrusted with the entire responsibility of carrying out other activities and programmes.'

a. Product Development and Export Market Promotion

In order to increase exports, there is a need for the production of high quality commodities in accordance with the international demand and interest, which also implies the necessity of the identification and development of new products on the basis of the feasibility of production of available exportable commodities. It is equally, necessary to intensify the increase in exports to existing export markets, and to diversify the export market through the identification of new markets. Hence, the export base can be sustainably extended if stability and high quality are achieved in exportable commodities through quality amelioration and production growth of existing exportable product diversification in accordance with the demand of the export market, import and development of modern production technology, maintenance of high quality standards in the production process, identification and development of new exportable exploration of new markets other than the existing ones and emphasis on promotional activities in the targeted markets. Accordingly, with a view to establishing proper coordination between government agencies and the private sector and involving the private sector in the above mentioned activities to the maximum possible extent, attracting foreign investment in feasible sectors, various programmes relating to product development and export market promotion will be implemented during the Eighth Plan in the following manner:

i. Consolidation of the Production and export of major products being exported at present

Various programmes will be implemented relating to the product diversification and the enhancement of quality standards of existing export commodities such as woolen carpets, readymade garments, leather and leather goods, handicrafts and jewellery, lentil and spices (dry ginger, large cardamom); the extension of sheep farming for increased production of raw materials to substitute export; the development of textile industries through the attainment of increased production in cotton crops; the promotion of foreign and joint investment; import and development of modern technologies; changes in production technology; and the promotion of new export markets.

Woolen carpet

Various programmes will be implemented to attain diversification in the use, design, patterns and -colours of suitable raw wool for maintaining high quality standards, to develop specified production areas for minimizing the effect of carpet washing on environment, to promote export to new markets such as the U.S.A., Australia and Japan and to develop proper sheep farming management so as to reduce the import component in the supply of wool and augment the value added, simultaneously promoting the leather industry.

Readymade Garment

Programmes aimed at the extension of cotton farming and the establishment of textile mills for substituting the import of fabric is raw materials, the establishment of large units to produce fashionable garments and the promotion of other markets besides the U.S.A., such as Japan, Australia and European Countries will be conducted. For these activities, emphasis will be given to foreign investment and the import of technology also will be undertaken.

Leather and Leather Goods

Programmes designed to increase the collection of leather through necessary arrangements for better sheep and goat farming, to extend organized slaughter houses, to impart and develop appropriate technology for the manufacture of high quality leather goods and to promote foreign investment will be implemented.

Handicrafts (including silver and gold jewellery)

Emphasis will be given on the increased production of traditional handicraft items; simplified and regularised import as well as supply of necessary raw materials; product adaptation and diversification of new products in

* Projected on the basis of the exports for the first nine months of the F.Y. 1991/92.

accordance with the demands of the market; and the introduction of modern designs, in addition to traditional Nepali designs in the production of gold and silver jewellery: As, there also exists a demand for handicrafts in India, market promotional activities will be conducted there, too. Foreign participation also will be encouraged in this sector as necessary in order to adopt modernity in the production technology.

Lentil

In view of the great demand for lentil in the export market, arrangements will be made for the extension of the production area, improved seeds and the development of technology for the growth in production.

Ginger, Dried Ginger and Large Cardamom

Various programmes will be conducted relating to the development of new production technology for the production of less fibrous ginger through the use of high quality stock for the export promotion of this product used in spices; the development of a technology for the retention of natural colour in, ginger and large cardamom through necessary improvements in the drying process, product diversification through the production of dry ginger powder, large cardamom powder and oil (ginger oleoresin); and the promotion of market in South-East and Far-East Asian Countries in addition to India and Pakistan.

2. Development and Export Promotion of New Products

Upon implementing programmes for the development of necessary basic infrastructure for developing the identified and partially developed exportable commodities such as tea, vegetable seeds, cut flowers and orchids, silk and allied products and essential oils into fully exportable products, appropriate activities will be undertaken for the market promotion of these products.

Tea

In view of the demand for orthodox tea (leaf tea) especially in the European markets, emphasis will be given on the implementation of the programmes designed to increase its production. For this purpose, the production technology from India and Sri Lanka will be imported and developed while the tea production area will be extended, and foreign assistance encouraged in this sector. In the context of tea being exported in a limited quantity to Germany, efforts will be made for market promotion in Italy, France and Australia including Germany, too.

Vegetable seeds

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Endowed with diverse climatic regions, Nepal enjoys comparative advantages for producing various kinds of vegetable seeds. An intensive market promotion campaign will be launched in view of the great demand for such seeds in neighbouring countries as well as Thailand. In addition to expanding the production area for such seeds, necessary technologies will be employed to boost production, to maintain quality standards for edible certification and to arrange proper storage and packaging. A programme will be formulated to provide land on rent or lease for the expansion of production area. Moreover, experimental programmes will be undertaken in the export of green vegetables.

cut Flowers and Orchids

There is an abundance of special kinds of flowers and orchids in Nepal because of its diverse land-topographical structures and different kinds of forests and regions and there exists a great possibility of producing these items for commercial purposes, too. For the export of these products, basic structures (cold storage, quality standard certification etc.) will be established at export points in view of their extreme sensitivity and short product life. These products will be developed through the use of improved seeds and technology in addition to providing land on lease or rent for production. Market promotion activities will be specially concentrated in the Gulf countries and European nations in view of the great demand for flowers and orchids in those countries.

silk and its products

Special programmes will be implemented to increase the production and production area of silk, whose production is being carried out at a preliminary stage in a limited quantity in limited areas. Necessary programmes will be implemented by formulating them for the production and export of silk products through the import and development of modern technology, and foreign investors will be encouraged to invest for the development of this sector.

3. Identification and Development of New Potentially Exportable Products:

Efforts will be made for the production and development of new, potentially exportable but not yet fully developed products such as mushroom, saffron, computer software, coffee and others upon identifying the products and conducting necessary studies and surveys.

4. Development of Quality standards, Packaging and production Technology:

As it is necessary to augment the packaging process along with the maintenance of high quality standards through the import and development of modern production technologies to make the country's available exportable products more competitive in the international markets, the government agencies will assist the private sector in augmenting quality standards from the production level to the export stage through relevant research and development activities. His Majesty's Government will provide technology assistance and the services to the private sector in the establishment of quality standard development units in the production sectors.

5. Special Export Promotion Programme

Special programmes will be launched to promote exports in the traditional export markets of India and the Tibetan Autonomous Region of China. Through the proper implementation of the trade treaty with India, the export of industrial products and other commodities in great demand in India such as processed herbs and medicinal plants, oil seeds and other agro-based products in addition to traditionally exported items will be increased by enhancing their production. Furthermore, in the perspective of both India and Nepal heading towards open economy, efforts will be made to simplify the procedures to achieve unrestricted export entry for Nepalese products into India. Similarly, the barter trade being carried out with Tibet in traditional goods will be extended to include new industrial products, too. Programmes will be formulated and implemented to increase trade in foreign exchange by simplifying the procedures for the export of cement and day-to-day consumables (confectionary and beverages) etc and the import of raw wool and other necessary commodities from Tibet. Efforts will be made to promote counter trade in identified specific commodities with East European and South-East Asian countries besides Tibet.

Various programmes will be undertaken to boost the trade with SAARC nations besides the countries mentioned above. Trade agreements will also be signed with other nations in addition to the countries with whom there already exist trade relations. Nepal will play a special role in the SAARC forum for the formulation and implementation of programmes aimed at promoting special trade with ASEAN and EEC countries and other economic associations. In this context, Nepal's participation will be progressively enhanced in the programmes of trade promotion and cooperation conducted by international agencies.

b. Institutional Programme

In order to efficiently implement the declared policies and programmes of the Eighth Plan, various agencies operating in the trade sector will perform the following activities:

1. Foreign Trade policy and Research Institute

This institute will undertake constant supervision and monitoring of the implementation of trade policies, provide counselling and recommendations to the Ministry of Commerce and Board of Trade in solving the problems arising therein and conduct necessary research and studies with regard to the consolidation of the liberal trade position.

This institute will undertake studies for product development and organise necessary training for foreign trade in association with Nepal Trade Promotion Organization. In the context of promoting export, the institute will assist His Majesty's Government in signing treaties and agreements and amalgamating projects with international agencies and other nations and also in establishing coordination through the Ministry of Commerce and Board of Trade between private sectors and the government and non-government agencies related to agriculture industry, forestry, finance and banking.

2. Nepal Trade Promotion organization

This organization will launch programmes jointly with Foreign Trade Policy and Research Institute to organize necessary training programmes for foreign trade and undertake studies for product development. The organization will undertake studies and necessary action for the development of production technology and packaging in order to achieve high quality standards and increased value added of identified exportable products and transfer these technologies to the private sector through other concerned government agencies.

This organization will be responsible for conducting various programmes relating to different aspects of export promotion such as identification and promotion of the market, meetings between exporters and importers, exchange of trade delegations, participation in international trade fairs and exhibitions and arrangements for hosting such fairs in the country, international prices of exportable goods, structure of the export market, the trade policy and regulations of the importing countries, and arrangement of other necessary trade services. At the same time, the organization will conduct studies on import management and provide necessary services. It will also be involved in leasing for and implementing assistance programmes and projects for export promotion and import management through international agencies.

Under the Stabex project operating under this organization, Nepal has received the Stabex transfer amount in the form of grant assistance for three years as a compensation for the loss accrued to Nepal in the export of leather and pulses for the period between 1986 and 1990. This amount has been utilized in the modernisation and promotion of leather and leather-shoe industries in the government and private sectors, manpower development, and research and development of hide. The money is also utilised in product development work, particularly the research & development and distribution of improved lentil seeds, and enhancement of quality standards and value addition in leather goods and pulse. This has been achieved and a more conducive atmosphere for their export has been created.

Various programmes will be implemented under this project during the Eighth Plan period in different areas such as the development of hide, technical training, modernization of industries and development of technology, market promotion, assistance to low income groups and cottage industries, exhibition of leather and the establishment of testing centres as well as encouragement to commercial farming of lentil crops, improvements in processing and research.

3. Nepal Transit and warehousing Company Limited

With a view to minimizing the transit costs, it is targeted to build warehousing facilities in the customs areas of Birgunj, Tatopani (Sindhupalchowk), Bhairahawa, Kakarbhitta, Dhangadhi and Tribhuvan International Airport. The total capacity to be targeted is 8,000 m. tons. Similarly, a 1,000 m.ton capacity warehouse and an office building are targeted to be built in the container yard of Haldiya Port, India.

During the plan period, there is a target to acquire land and construct an office building for the head office and purchase land for residential quarters at Birgunj and Biratnagar. In order to minimize the transit cost through simple, reliable and cost effective transit system, the -Transit Information Centre will be further strengthened and made more effective. It will be equipped with necessary physical facilities to familiarize the concerned sectors with the transit means and processes and to provide counselling and transit information services. At the same time, the warehouse clearing and undertaking service being operated by the company at present will be further extended and the forwarding service will be conducted in a more organized and effective manner.

Implementation Arrangements

As the competitive trade sector forms the focal point of the liberal and competitive market-oriented economy proposed by the Eighth Plan, the private sector will be mobilized to undertake entire commercial activities from production to export and import. The Ministry of Commerce and the Board of Trade will perform a coordinating role for the effective implementation of the stated policies and programmes and the solution of contingent problems arising therein in association and coordination with other government agencies. Trade related research studies and promotional activities will be carried out by the Foreign Trade Policy and Research Institute, operating as a technical wing of the Ministry of Commerce, and the Nepal Trade Promotion Organization to be organized jointly by government and private sectors. For the effective implementation of product development and production programmes necessary for export development, the Ministry of Commerce will coordinate with other government agencies to provide incentives, training and other necessary assistance to the private sector.

Details of Expenditure

During the plan period, Rs. 278 million is allocated for the implementation of programmes in the trade sector. The details of the expenditure and the sources of financing are estimated to be as follows:

Proposed Development Budget for the Eighth Plan

(in thousands of rupees)

	His Majesty's Govt.	Foreign Assistance	Domestic Sources	Private Sector Sources	Total
1. Board of trade, Foreign Trade and Research Institute	7770				7770
2. Nepal Trade Promotion Organization	50217		5000	17915	73132
3. Stabex Project		132668*			132668
4. Nepal Transit and Warehousing Company Limited	39300		25200		64500

Total	97217	132668	30200	17915	278000
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* Expected from European Economic Community

Appendix 1
Export projections of Some Major Products
(in millions of rupees at F.Y. 1991/97 prices)

Product	1991/92*	1996/97	Average Annual Growth Rate (percentage)
Woolen Carpet	6,427	18,140	23.0
Readymade Garments	2,241	3,840	5.5
Leather	856	901	1.0
Leather and Leather Goods	244	464	13.7
Handicrafts (including Jewellery)	11.p	284	19.5
Other Products	2,644	8,091	25.1
Total	13,228	31,700	19.1

* based on real figures for 9 months and projections for the last three months.

Appendix 2
Foreign Trade and Balance - A Projection

Rs. in million (at the 1991/92 price)

Export

F/Y	Fuel	Food Products	Capital Goods	Industrial Goods	Raw Materials	Total	Annual Growth Rate
1991/92	-	2472.8	32.7	9098.3	1623.9	13227.7	
1992/93	-	2349.2	25.8	11839.0	1580.5	15794.5	19.40
1993/94	-	2231.7	20.4	15001.0	1438.3	18791.4	18.28
1994/95	-	2120.1	16.1	18727.0	1497.2	22360.4	19.00
195/96	-	2014.1	12.7	23126.0	1457.3	26611.1	19.00
1996/97	-	1913.4	10.0	-28358.0	1418.3	31699.7	19.12
Average Annual Growth Rate (%)		-5.0	-21.0	25.50	-2.7	19.1	

Import

F/Y	Fuel	Food Products	Capital Goods	Industrial Goods	Raw Materials	Total	Annual Growth Rate
1991/92	2696.8	2620.5	7166.1	14897.0	2951.1	30331.5	
1992/93	2885.6	2741.4	9593.9	16402.0	35003.5	35003.5	15.4
1993/94	3087.6	2902.0	10639.0	18035.0	3850.2	38531.8	10.0
1994/95	3303.7	3092.9	11829.0	19868.0	4368.0	42461.6	10.2
1995/96	3535.0	3314.2	13287.0	22044.0	4949.0	47129.2	11.0
1996/97	3782.4	3575.9	15036.0	-24637.0	5614.4	52645.7	11.7
Average Annual Growth Rate (%)	7.0	6.4	16.0'	10.6	13.7	11.7	

Trade Balance

F.Y.	Trade Balance
1991/92	-17103.8
1992/93	-19209.0
1993/94	-19722.4
1994/95	-20101.2
1995/96	-20518.1
1996/97	-20946.0

Average Annual Growth Rate
4.1
(1991/92- 1996/97)

Tourism

Introduction

Nepal has become a centre of attraction and is being developed as a tourist destination due to its unique natural beauty, world famous snow-peaks like Mt. Everest that identifies the country itself and various cultural specialties of its own.

Although it has not been very long since Nepal was opened to foreign tourists, yet the tourists inflow rate to Nepal has been increasing day by day. In 1975, the number of tourists visiting Nepal reached 92,000, whereas the figure was just 6,179 in 1962. The growth rate during the decade 1980 and 1990 was not more than 75 percent on the average. In 1991, the total tourist inflow increased by 155 percent and reached upto 292,995. The number of Indian tourists arriving by air in the same year reached 92,506 which showed an increase by 5).8 percent over the previous year's arrivals.

Tourism industry has already established itself as a major industry to earn foreign currency. Foreign currency earned from this sector reached upto US \$ 58,600,000 in 1990, whereas it was US \$ 78,000 in 1962. The- contribution from the tourism industry in the GDP is about 3.7 percent at present.

Most of the tourists coming to Nepal are from North America, West Europe, East Asia and neighbouring India. The average stay of these tourists is 12 days in Nepal and their average expense is US \$ 27 per day.

The Tourism Development Board formed in 1957 could be termed as the very first attempt towards organizational efforts made in the planned development of tourism, in Nepal. Subsequently, the Department of Tourism was established in 1959. Likewise, Ministry of Tourism was set up in 1977. Nepal Tourism Development Committee was organized in 1969, which prepared the Tourism Master Plan, 1972. Now, the Department of Tourism, Department of civil Aviations, Royal Nepal Airlines Corporation (RNAC), Hotel Management and Tourism Training Centre and the Taragaon Development Committee have been put under the Ministry of Tourism.

The development of air transport, being an extremely important means of transport to bring the tourists into Nepal, has been considered to be a great supplement to the development of tourism. The history of air transport in Nepal began from the landing of Dakota airplane at the Gauchar Airport in Kathmandu in 1949.

Although in the beginning, works relating to civil aviation were conducted with the assistance of Indian technicians, after 1972 these works began to be performed by the Nepalese themselves. At present there are 43 airports in Nepal, including/one international airport, and of/which 38 are under regular operation by RNAC. The development and expansion of air transport have not only helped in increasing the international contacts, but also contributed to the national integrity by making transportation possible to and *from* the remote places of the Kingdom. It has been experienced that the international and domestic air transport systems have played a significant role in promoting tourism, trade and commerce, including in the times of emergency and natural calamities.

Progress during the Seventh Plan

The tourists inflow in Nepal had increased by 11.05 percent on the average during the first *four* years of the Seventh Plan (1984/85-1989/90), whereas it went down by 9.8 percent following the deadlock due to the termination of trade and transit agreements between Nepal and India in 1989. The foreign exchange earning reached upto US \$ 6,83,43,000 towards the final year of the plan period, which grew by 11.24 percent as compared to the average during the five year period of the plan. An average per tourist expenditure was US \$ 320 (US \$ 27 per day) during that time, and the average tourist stay was 11.68 days. An analytical study of these statistics shows that during that time also the average tourists, not the targeted higher standards tourists, were in majority. The progress achieved in this sector during the Plan period is recorded as follows:

a. Development of tourism in the Himalayan Region

Work has been undertaken to broadcast weather reports by radio and prepare a tourist handbook.

b. Tourism survey and Research

Under it 26 feasible tourist spots were surveyed, and study and statistics booklets were published in 3 subjects.

c. Resort Area Development

A programme has been initiated to develop Annapurna Conservation Area.

d. Consolidation of Tourism Services

Works relating to drinking water and sanitary system of tourism information centre Kakadvitta, reconstruction of Kakani guest house, maintenance of Snow View Hotel at Pokhara, setting up of Tourism Information Centre at Jomsom in Mustang, and a mobile tourism police system in Kathmandu, have been initiated.

e. pokhara Tourism Development

Works like the construction of tracks around Phewa lake, afforestation and landscaping at the camping site of Phewa lake and Tutunga, are in progress.

f. Tourism promotion and publicity

Together with the publication of various publicity materials, tourism programmes have been conducted in the source countries under joint collaboration with semi-government and private sectors.

g. Taragon Development Committee

Work has been initiated to mobilize financial resources with the loan assistance of the Danish Government for the expansion of Hotel Village at Buddha, Kathmandu.

h. Tourism and Hotel Management Training

3241 trained personnel have been produced in this sector.

i. Improvement of Airports

With the completion of the consolidation works of the runway and the parallel taxi-way at Tribhuvan Airport, it has been possible for the big jet airplanes to be operated. In the same way, great support has been extended to the promotion of trade and tourism with the improvement of the levels of efficiency and facility of the airport upon the completion of the construction of international terminal building, operations building, and the control tower. Likewise, the other completed works include: reinstallation of the borrow area at the airport, meteorological forecasting building, water supply security and storehouses.

A master plan has been prepared with design estimate of the supply of water and sewerage system together with that of runway at Nepalgunj airport in a way to expand physical facilities at the internal airports. Similarly, the construction of 5 terminal buildings, 5 control towers, 6 residential quarters for the personnel, 5 residential quarters for the police, 2 drinking water systems, 5 runway expansion and improvement works, 4 river control systems, one sewerage and one fencing work are completed.

j. Civil Aviation services

Extending point-to-point communication services to 5 airports including the Tribhuvan International Airport in Kathmandu, air traffic control services at 8 airports and Aerodrome Flight Information Services at 22 airports have been made available. Air traffic services have been improved with the division of Kathmandu: Air Information Sector into Kathmandu and Nepalgunj sectors.

k. communication and Aviation support

Communication and Aviation support terminal building in 31 airports have been furnished with equipment and are being operated.

l. Civil Aviation Training

568 technicians have been prepared by conducting basic and refreshment trainings in communication, ATC, radio and fire fighting areas.

Progress during the Fiscal Years 1990/91-1991/92

1. Previously restricted areas with high touristic potential like Mustang and Manasalu have been opened for trekking.
2. Agreement has been made for implementation of Tourism Development Project presented by the Appraisal Mission of Asian Development Bank for the first time. The bank will make available about 450 million rupees as IOan.
3. Three other five star hotels, in addition to Soaltee Hotel, are allowed to open casinos.
4. Permission has been granted to establish a deluxe hotel at Taragon in Bouddha in joint collaboration with private sector.
5. Three airlines and one helicopter services under private sector investment are allowed to operate their internal flights. Some have already begun operating their services.
6. A study report has been prepared by reviewing in-service manpower in tourism sector, under the joint auspices of UNDP/ILO and Hotel Management and Tourism Training Centre. In addition, 885 trained persons have been produced.
7. RNAC has started its regular service between Kathmandu and Bombay.
8. Work has been initiated to construct three new airports at Talcha in Mugu, Kalikot and Salle in Rukum.

9. 365 ropanies of land and 112 houses procured for the expansion of Tribhuvan International Airport have been compensated. Likewise, works have been initiated for the construction of apron.
10. Works like installation, improvement and the functioning of the communication and aviation support and the terminal building equipment are being conducted at the Tribhuvan International Airport, and the airports of Nepalgunj, Biratnagar, Dhangadhi, surkhet, Simara and Rumjatar.
11. Works under the communications services have been initiated to provide point to point communication and aerodrome flight information services at one additional aerodrome of remote hilly region.
12. Technical flight and landing procedures have been developed and implemented with the help of communications and aviation support equipment at Nepalgunj Airport to facilitate night services in order to augment the internal flight system.
13. Two fire extinguishing vehicles will be available by the end of this year under the French loan assistance of 3.5 million French Franc in order to avail the facility of 6 categories of fire fighting services at the Tribhuvan International Airport.
14. In accordance with the need for a separate aircraft for the Department of Aviation to bear the regulatory responsibility relating to civil aviation by the Department of Aviation in the- capacity of a national aeronautical authority, a semi-autonomous air transport division has been set up under the department to efficiently operate aeroplanes.
15. Aviation security system has been initiated by arranging necessary machines and equipment at Tribhuvan International Airport under Canadian assistance.
16. In order to improve international air transport system bi-lateral aviation agreements have been concluded with 12 countries, i.e. India, Thailand, Bangladesh, Pakistan, Sri-Lanka, China, United Kingdom, Singapore, Maldives, Brunei, Bhutan and Russia. An understanding has been reached with Federal Republic of Germany and Japan to operate Air Transport.

Existing problems

1. Very limited spots are available for tourism and these spots are put under increasingly high pressure.
2. There is a shortage of infrastructure necessary for proper 'development of existing as well as feasible tourist spots.
3. No attention has been focused on the promotion of environmental, cultural and religious properties while planning for the development of tourism.
4. There is a lack of appropriate programmes that would inspire tourists to a longer stay in Nepal incurring higher expenditure.
5. No effective implementation of the promotional works has been made for the development of tourism.
6. The services and capacity of international airlines which have a direct linkage with Nepal are insufficient.
7. Internal air services are limited and the services are not up to the required standard. In the same way, adequate infrastructures are yet to be completed for the development of air transport.
8. Until now it has not been possible to increase the tourist inflow all round the year. Consequently, the impact of seasonality on tourism is prevalent. .
9. Tourism sector has not been able to maintain close linkage with other economic sectors.
10. In totality, there exists a problem of the supply of necessary materials for the promotion of tourism. Also, there is a lack of appropriate policy, incentives, appropriate rules and regulations and their effective use.

Background of the Eighth Plan

The development of tourism sector is of great significance in consolidating the national economy of the country. In a country like ours which is considerably rich in touristic endowments and heritage, where special cultural traditions are still prevailing. The country abounds in beautiful natural scenes, challenging snow peaks for the courageous and the adventurous, and the rare, exquisite natural vistas for the explorers and the researchers. Tourism industry can be developed in a way to contribute substantially to the national economic development by effectively using these heritages without causing any adverse impact on them. For economic development and increased foreign currency earnings apart from the promotions of industry and trade in Nepal, the development of tourism sector as a service industry is indispensable.

This industry appears to possess higher comparative advantages in view of its being one of the important industries to earn foreign currency without causing any adverse effect on environment and also being endowed. With the opportunity of using the existing geographical and culture heritage. Therefore, tourism industry should

be promoted with higher priority. This industry can also play a significant role in the development of rural and mountainous areas of Nepal. This, being an employment oriented industry, can also be used to solve unemployment problems, if it is expanded to different additional areas of the country.

Taking the above facts into consideration, HMG in the Eighth Plan period, will attract private and foreign investors to the tourism industry in order to bring about effectiveness in the promotion of tourism by developing infrastructures in new geographically feasible places. In the same way, it will create a necessary atmosphere suitable for implementing the policies formulated with an eye on the appropriate participation of private sector, communities and non-governmental organisations. The fact that the tourism industry could not be developed to directly influence the strengthening of country's economy in the past is evident from the problems noticed in this field. Therefore, substantial steps will be taken to resolve these problems by formulating policies under tourism sector, in the Eighth Plan period.

His Majesty's Government, having followed a liberal economic policy and having taken tourism industry as a major sector, will play a coordinating and supportive role in the form of a catalytic agent to mobilise the private sector in its development.

Objectives

1. To earn larger amount of foreign currency by the development of tourism industry.
2. To keep on expanding the tourism activities to other places of the country in order to ease the tourist pressure in a few limited areas.
3. To improve the living standard of the people and to reduce the level of poverty by increasing the employment opportunities through the expansion of tourism industry.
4. To improve the quality of services and facilities relating to tourism together with the promotion of environmental, historical and cultural properties.
5. To develop necessary infrastructures required for the operation of efficient, safe and well-facilitated and standardized air services.
6. To forge a close coordinating link between tourism sector and other sectors of the economy.
7. To augment the use of local materials and services in the tourism industry.

Policies

It is aimed to develop Nepal as a final destination for tourists and to operate the tourism industry as a main source of employment generation by implementing the following policywise activities:

Tourism Promotion and publicity

1. Tourism promotion programmes will be launched in order to increase the inflow of the tourists with greater spending capacity from Australia, Western Europe, America and also from the newly developed tourist market_ such as Eastern Asia and South East Asia.
2. Special promotional programmes will be formulated and launched to further increase the number of Indian tourists.
3. Joint promotional activities will be launched with the collaboration of HMG, semi-governmental organizations, and the private entrepreneurs in order to effectively coordinate the programmes and to improve the standard of tourism. In order to impart stability to these activities, a separate "Promotion-fund" will be created with the collective participation of them.
4. In order to provide facilities to the tourists coming to Nepal, scheduled and chartered services of foreign airlines will be encouraged, and the visa process will also be simplified.
5. A work plan will be made in collaboration with semi-government agencies and private entrepreneurs involved in the tourism sector to promote cultural heritage of the nation. Accordingly, programmes of religious and cultural tourism as well as internal tourism will be launched to develop these sectors. Programmes will also be made to gradually reduce the impact of seasonality by introducing touring packages prepared by the private sector.

An agency will be formed in the private sector or jointly with the participation of the government and private sector to provide air-conditioned bus services in order to provide comfortable transportation facilities to tourists to travel in and around Kathmandu and in other places where transport infrastructures are available.

Different types of publicity materials giving details of information about Nepal's cultural, historical, natural and religious features will be published and distributed inside the country and abroad.

Nepalese diplomatic missions will be mobilized and tourism promotion units will also be set up in the prominent tourism markets to promote tourism.

Public awareness will be enhanced by familiarizing the local people about different aspects of tourism.

Production, Development and Utilization of Tourism

1. Encouragement will be given to produce materials and services within the country to be used by tourists. In order to make tourism development sustainable even from various environmental points of view, programmes necessary for the development of local foods and fuel will be launched.
2. A duty free shop will be opened at Kathmandu in order to provide various indigenous products (handicrafts etc.) and other touristic items on the basis of feasibility. These types of shops will be opened at other locations of touristic importance.
3. Survey and research will be conducted to identify places of tourist attractions scattered throughout the Kingdom. Appropriate tourism programmes will be launched in those identified locations with local public participation for the benefit of the local people.

Adventure Tourism Development

1. Respective infrastructures will be developed at new trekking areas as a part of phasewise opening of new trekking routes and tourism, spots.
2. Arrangements will be made for introducing trekking programmes at the newly opened, previously restricted, touristic areas in order to ensure environmental safety, economic benefits to the rural people, and the safety to tourists, administrative control and monitoring of visiting tourists.
3. Non-governmental organizations or the local communities will be encouraged for the preservation, maintenance, consolidation, operation and even monitoring of the trekking routes, camp sites, other allied services and their development.
4. New peaks will be gradually opened for mountaineering. In this context, 8 peaks of the Western Region will be opened from the spring of 1993.
5. Organized tourist activities will be launched keeping in mind the proper preservation of national parks and wildlife sanctuaries and reserves.
6. Appropriate river-rafting activities will be operated preventing the rivers from being polluted.

Development of Additional Tourism Activities

1. Relevant programmes upon their formulation will be implemented to develop conventional tourism and to extend new activities like SPAS, hot air ballooning, Land/Para gliding, wind surfing, and fishing.
2. A feasibility study will be undertaken for opening an international class golf course at an appropriate place.

Private Sector Mobilisation and Facilities

1. Private sector will be mobilized effectively after receiving proposals from this sector to raise the standard and capacity of the tourism services at hotels and other tourist spots. For this, joint or separate local and foreign investment will be attracted.
2. During the plan period, HMG by itself or by totally leasing to the interested local or foreign investors, develop resort areas at appropriate places for balanced tourism development.
3. Additional facilities and incentives will be provided to attract effective private sector participation in tourism sector.
4. Under the system of partial convertibility in foreign exchange, arrangements have been made to sell a certain portion of foreign exchange, earned by the trade and services sector, to the local banks at rates fixed by the market system and the rest to the Nepal Rastra Bank at the government rate.
5. A fixed percentage of foreign currency earned can be deposited at the banks for the investor's use in tourism, the percentage of which will be gradually raised.
6. Required loans will be extended to tourism sector by commercial banks on the basis of priority.
7. Various financial facilities will be provided as required.
8. Private sector agencies like Nepal Mountaineering Association will be involved to a greater extent in the development of appropriate infrastructures by HMG.

New Infrastructure Development

1. New and attractive tourist spots will be identified and necessary physical infrastructures will be expanded in order to extend tourism to other places of the Kingdom to ease the pressure at limited spots.
2. Main tourist spots in each development region will be developed.
3. Appropriate measures will be undertaken to maintain the cleanliness of existing tourist spots and the necessary physical facilities will be added.
4. Government investment will be increased to expand physical infrastructures like road, communication, air transport network.
5. Private sectors and local NGO's will be mobilized, besides government investment, in the construction, preservation and running of physical infrastructures.

Administrative Consolidation

1. Mobile tourist police system will also be made available outside the valley for the safety of the tourists and to act promptly and solve any contingent problems that may arise there.
2. Improvements will be made in the procedure of preparing the curriculum for the training of required manpower of this sector within the country with the participation of the commercial agencies involved in the tourism-sector. This will be done in co-ordination with the users of such manpower.
3. Administrative procedures will be simplified and appropriate environment will be created with attractive facilities for the promotion of local or foreign or joint investment in tourism.
4. The current administrative procedure relating to hotel, travel, trekking and rafting enterprises will be simplified.
5. Tourism laws and acts will be updated with scientific changes and amendments.

Royal Nepal Airlines corporation

1. The corporation will extend its international services to Japan and France in the first year, and South Korea and Australia by the fourth year of the plan period, in order to reach air service to the tourist originating places.
2. Towards domestic air service, regional centres of Biratnagar, Pokhara and Nepalgunj will be connected by trunk services to Kathmandu, and from these places regular and required air services will be extended to other STOL airports.
3. STOL air services will be increased to places of tourist attractions from Kathmandu and Pokhara.
4. In the first year of the plan period, large long-distance foreign airlines will be involved or airplane will be acquired on lease to run the above programmes. A new jet-plane also will be acquired during the period to expand the regional air services.
5. A turbo-prop airplane will be acquired to improve domestic air service.
6. Domestic and international night-air-services will be operated to increase service to the maximum by utilizing the planes in the possession of the corporation.
7. All domestic seat reservations in tourist routes will be computerized to serve the tourists more efficiently. For the promotion of tourism, general Sales Agents (GSA) will be appointed in countries where the corporation does not operate regularly.
8. Attempts will be made to make the corporation more efficient and service-oriented by mobilizing local or foreign private sector investments.

Developing Tribhuvan Airport as a Focal-Point

1. Arrangements for physical facilities and extension works will be made according to the Tribhuvan International Airport Master Plan.
2. Keeping in mind the increase in foreign trade, a cargo complex physical structure with modern management will be established at the Tribhuvan Airport.
3. The physical facilities and technical equipment at the Tribhuvan International Airport will be made up-to-date and such facilities will be increased.
4. The Tribhuvan International Airport management will be gradually made autonomous to make it more effective.

Improvement of Domestic Airports

1. For the decentralized air transport system, necessary physical and auxiliary avionic facilities will be provided to develop Biratnagar and Nepalgunj as bases.
2. Necessary physical and avionic equipment and facilities will be provided to develop and standardize the airports at places of importance from touristic and other points of view.
3. Being safety the prime concern of civil aviation and air transport, necessary physical and avionic facilities as well as communication equipment will be gradually provided on a priority basis at the already operating airports.

Liberal Sky policy

1. Foreign airlines will be encouraged to operate scheduled air services to Nepal.
2. The present foreign charter policy will be reviewed and additional charter services will be encouraged from other countries.

Standard Domestic and International Air Services

1. To expand the domestic air services and standards, the present air routes will be organized, and 50-60 seater aircraft for service between central and regional airports and 18-19 seater aircrafts for services between regional and other airports will be operated.
2. Bilateral government and business air service agreements will be gradually made for the promotion of international air services.
3. The domestic airports under construction- will be completed according to the fixed time schedule.
4. At places where airport or surface transport is not possible, the services of helicopters will be promoted with the construction of helipads.
5. The utility of Tribhuvan International Airport will be raised by increasing its time of service operation.
6. Making proper arrangements for night services at Biratnagar, Nepalgunj and Bhairahawa airports, the use of the aeroplanes and airfields will be enhanced.

Private Sector Encouragement in Domestic Air Service

1. Domestic, foreign or joint investments under the private sector will be encouraged with clear and simplified operational procedures to operate in domestic routes and to expand air services.
2. The investors in domestic air services will be provided with the same facilities as given to the industry sector.
3. Domestic, foreign or joint investments from the private sector will be encouraged for efficient operation of airports and airport services.

The Use of Nepal Sky for International Air Services

1. Attempts will be made to link Tribhuvan International Airport with international trunk air routes.
2. Air routes will be promoted to allow east-west and the Trans Himalayas international flights over the Nepali sky.
3. Processes will be implemented to encourage agro-aviation for the use of modern technology in agriculture and forest production and preservation. Encouragement will also be provided to flying clubs, hot-air-ballooning, gliding and other general avionic activities.

Manpower for Standard civil Aviation Services

1. The civil Aviation Training Centre will be consolidated with special priority to prepare basic and middle level manpower for various civil aviation fields within the country.
2. The professional skills acquired by Nepal in civil aviation sector will be exchanged with similar sectors of other countries. National and international seminars and symposiums will be held in Nepal on civil aviation.

Active participation will be made in international meetings, conferences, seminars etc on civil aviation to exchange and gain from knowledge and experiences and to present the national services to the international sector with a view to projecting the image of the nation.

Safe Flight Arrangement for the Control of Environmental Pollution

1. Suitable control measures in the context of Nepal will be formulated and gradually implemented in order to maintain the environmental balance by controlling the polluting caused by the development and operation of air transport.

2. Appropriate arrangements will be made for the construction and development of airports so that they do not adversely affect the environment of the area.
3. Restriction will be imposed on unauthorised entry and on activities attracting animals and birds upon fixing restricted area around the airport for a safe flying environment.

Consolidated and Efficient civil Aviation services

1. Implementing timely reforms in the organizational structure of the Department of civil Aviation in keeping with the competitive growth of air transport and civil aviation, it will be developed as a "civil Aviation Authority" to act as an autonomous agency in order to effectively discharge the responsibility of the aeronautical regulatory authority.
2. Rules and guidelines relating to civil aviation will be updated.
3. Equipment will be updated by procuring new items to provide quality civil aviation services in keeping with intense technology development taking place in the field of civil aviation.
4. Trainings and Seminars will be conducted in order to upgrade the skill of manpower involved in the civil aviation services.
5. Appropriate reforms in the context of the changed times will be carried out by introducing mechanisation in the office management of the airport and the Department of civil Aviation.

Timely Mobilisation of Air Services during Natural calamity and Emergency

1. Civil rescue services will be developed in order to make rescue .operati0_ reliable and effective.
2. Procedures of coordinating with different agencies-and availing people is participation for rescue operation will be formulated.
3. A work plan will be prepared identifying the services of other airports including the Tribhuvan International Airport during natural calamities such as earthquakes; floods etc. and other emergency situations.

Construction of the Second International Airport

Regarding the construction of the second international airport construction work will be initiated upon completion of the detailed study subsequent to the selection of the most suitable place.

Organisational Arrangement

Following reforms are proposed in the organisational structure of Ministry of Tourism in order to execute the aforementioned policies and programmes efficiently and effectively.

1. Tourism Development Council

A "Tourism Development Council" has been constituted under the Chairmanship of the Prime Minister in order to remove obstacles during the process of implementation, provide correct directives and formulate policies by bringing about coordination among different ministries for the sake of the development of the tourist industry. Officials of the government and the private sector associated with this industry have been represented in the council in 9rder to have coordination in the field of tourism as the development of tourist industry is to be promoted through the joint effort of the government and the private sector.

A "Tourism Development Board" has been constituted under the Chairmanship of the Minister for Tourism also with the representatives from the private sector in order to execute works as mentioned above. These Council and Board will be gradually strengthened for implementing and monitoring the declared policies.

2. Consolidation .of the Ministry of Tourism

Ministry of Tourism will be strengthened on the basis 9f increased activities and prospects of the tourist industry. A separate study and research section will be set up under this Ministry.

Targets and Programmes

The number of tourists arrival is estimated to grow at an average of 8 percent per annum and foreign exchange earnings at an average of 17 percent during the plan period. While about 324,109 tourists are expected to visit Nepal in the first year of the plan this figure, according to the projection, is estimated to reach 442,214 in the final year of the plan. Similarly, while US \$ 72,360,000 is targeted to be earned from tourism in the first year of the plan, this figure is estimated to reach US \$ 137,000,000 in the 'final year of the plan.

Regarding programmes to be implemented in the tourism sector during the Eighth Plan, emphasis will- be given' on activities such as consolidation of existing physical infrastructure, construction of new touristic places and

development of infrastructures and ventures for promotion of tourism to 'be effectively managed on a modern concept in order to avoid congestion in the limited touristic places. These activities will be carried out by involving the private sector as much as possible in a way that new employment opportunities are available to the rural areas and that tourism makes a direct contribution to the economic development of the country. His Majesty's Government will make a direct investment in the following programmes and private fund and resources will also be mobilised as appropriate.

1. Development of Mountain Tourism

Appropriate programmes relating to mountaineering and other associated arrangements under this heading will be undertaken with the objective of protecting the environment and increasing the local employment. Under such works, participation of concerned non-governmental organisations will also be activated; mountain peaks cleaned; arrangements and distribution of modern information system relating to mountain tourism organised; administrative and other arrangements relating to new trekking routes organised, and rafting programmes, systematically developed.

2. International Contact and Market Management

Any business to be conducted on behalf of HMG with World Tourism organisation and other government level organisations will be undertaken. World Tourism day being observed annually will be celebrated. Programmes relating to celebration of 1993 as the South Asian Tourism Year and tourism market management will be conducted.

3. Tourism Research and Survey

Programmes relating to development and upkeep' of infrastructures appropriate to tourism will be identified, implemented and monitored. study and research related to tourism and survey of probable areas will be conducted and arrangements will be made for the dissemination of such information.

4. Production and Distribution of publicity Materials

Publicity materials on Nepal in the form of books and booklets in different languages, posters stickers etc. will be printed for distribution within and outside the country on the basis of the number of tourists visiting the country each year. Similarly, audiovisual photographs, slides and documentaries will be made and necessary equipment will be purchased for this purpose. Publicity will be carried out through communication media including radio, with a view to increasing people's awareness statistics and information relating to tourism will also be published.

5. Promotion of Tourism

India and other appropriate countries will be selected to attract tourists to Nepal. Special promotional programmes will be conducted aiming at these countries. Advertisement will be done targeting these countries. Appropriate persons from these countries will be offered special hospitality and invited to visit Nepal. Similarly, Nepal will take part in fairs, seminars and conferences relating to promotion of tourism to be organised in other countries. Programmes will be launched towards developing convention tourism by holding similar programmes in Nepal. Sustainable and effective organisational arrangements will also be made for the exchange of information relating to Nepal in the foreign countries. A joint programme involving Royal Nepal Airlines Corporation,' other airlines companies and private tourism entrepreneurs will be launched for this purpose and the activities incorporated into the programme will be undertaken on a priority basis.

6. Development of Cultural and Religious Tourism

Cultural tourism' will be developed by promoting cultural heritage. Arrangements will be made for co-ordinating stage performance of cultural programmes in a manner that it will provide assistance to artists engaged in this profession. Suitable programmes will be chalked out in co-operation with the private sector in order to promote religious tourism systematically; and programmes for infrastructure development will also be implemented in some religious sites as required. Under this, additional programmes will be implemented to attract the followers of Hinduism to the famous temple of Pashupatinath and other temples, Muktinath of Mustang, Janaki temple of Janakpur and other pilgrimages, Gosainkund of Rasuwa. Similarly for the followers of Buddhism Tilaurakot of Kapilbastu, Lumbini of Rupandehi, Devdaha and Ramgram of Nawalparasi will be developed. Suitable arrangements will also be made for tourists to observe religious and cultural festivals.

7. Extension of Tourism Services and Facilities

Under this programme, facilities will be extended and organised at Antudanda of Ilam, Manang, Tatopani of Myagdi_ Nuwakot, Sindhupalchok, northern belt of Gorkha and Janakpur area with a view to providing additional facilities to tourists. Similarly, repair and maintenance wrks of Dharahara (Bhimsen Tower) and also the consolidation of camp sites lying in the trekking routes will be done. The programmes will- be so introduced

that they would encourage the achievement of new courageous feats of adventure. Similarly, programmes will be implemented for the development of resorts with the involvement of the private sector in Hile of Dhankuta, Kulekhani and Daman of Makwanpur, Kakani of Nuwakot, Nagarkot of Bhakapur, Tutunga of Kaski, Khaptad and Shuklaphanta of Far Western Region, Ghodaghodi and Rara lakes of *Mid* Western Region including other appropriate areas. These places will be developed as integrated touristic land routes in order to attract all types of tourists to existing and new spots. Also, special programmes will be implemented for promotion of tourism by increasing physical facilities in these areas. In this context, trekking routes especially Kathmandu-Kulekhani Daman, Chitwan-Lumbini-Palpa-Pokhara-Gorkha-Katmandu, Pokhara-Jomsom-Muktinath-Manang-Pokhara, and other touristic places of Kathmandu-Trisuli-Nuwakot, Gosainkund-Helmabu-Kathmandu, Kathmandu-Biratnagar-Hile-Arun Valley, Guphapokhari-Taplejung-Illam-Biratnagar-Kathmandu will be developed and consolidated. Under this programme, mobile tourist police service will be made available regularly in Kathmandu and 'outside the valley to protect the tourists from harassment and also to provide them security. Besides, feasibility study will also be undertaken to open a golf course of international standard.

8. Consolidation of Tourist Services

The existing tourism centres supervising and monitoring the entire activities relating to tourism, implementing development programmes and also providing information to tourists will be standardized and equipped with facilities upon the upgrading of their level. . Under this is a building will be constructed on its own land in Birgunj and new offices will be set up in Manang and Namche. Works will be undertaken under the Pokhara office with a view to developing infrastructures for providing facilities to tourists visiting the seti gorge, Phewa, Rupa and Begnas lakes. Under the same programme, the central building of the Department of Tourism will be constructed in Kathmandu also to be used as the tourist centre to provide quality services and information to tourists.

9. Tourism Promotion Development Project

Under Asian Development Bank loan assistance, programmes will be implemented for the conservation of areas in Gorkha and Pokhara, construction of places in Kathmandu and Pokhara for receiving information and viewing traditional art, strengthening of hotel management and tourism training centre, development of entertainment spots for tourists in Pokhara, and the establishment of environmentally ideal trekking routes including upgrading of roads and airports. Under this project, assistance will also be received from European Economic Community (EEC) and United Nations Development Programme (UNDP).

10. Tourism Manpower Development Project

Basic, medium and high level trainings will be conducted in the fields of hotel, travel, trekking and rafting under Hotel Management and Tourism Training Centre, which will also provide necessary consultancy services in the field of tourism. Under this project, the Centre will also conduct conference and seminars. The Centre will be strengthened in order to conduct all these works effectively.

11. Taragaon Development Committee

A high standard and ultra-modern hotel will be built in the Bouddha region with joint financing of the private sector. Joint ventures will also be promoted for the development of resorts now under operation such as Kakani, Nagarkot, and Pokhara etc.

12. Extension, Addition of Physical Facilities and Consolidation of Main Airports

Following programmes will be implemented in the airports situated at Kathmandu; Nepalgunj, Biratnagar, Pokhara and Bhairahawa occupying the central positions in the international and domestic-air transport system.

Tribhuvan Airport

Relevant programmes have been included according to the Master plan for the extension of apron, cargo, fire prevention, workshop and domestic terminal building, hangar, international terminal building and second phase apron extension in order to strengthen the standard facility and increase the capacity of this airport. Similarly, the construction works relating to the chainlink fencing, peripheral road, residential quarter for the security employees will be undertaken at the airport for safe flights.

Nepalgunj Airport

Physical construction programmes such as the consolidation of runway, taxi way, 'access road, car parking, arrangement of drinking water and drain, residential quarters for the employees, cargo godown will be implemented according to the Master Plan at this airport, occupying the central position of the region.

Biratnagar Airport

Programmes relating to runway overlay, workshop building and drinking water management will be implemented at this airfield occupying the central position of the eastern region.

Pokhara Airport

Land was acquired some years back to construct a new airport due to limited operation capacity of the existing airport at Pokhara, which is important from touristic point of view. Construction works of other facilities including the runway will be undertaken in order to bring the new airport into operation by the end of the plan period.

Bhairahawa Airport

A programme has been included for the consolidation of runway, apron overlay and chainlink fencing in order to strengthen this airport. It is an important centre for the domestic air transport system as well as in view of the tourism promotion of the Lumbini Zone.

13. Construction and Extension of Additional Physical Facilities of Small Airports

While physical construction programmes such as improvement and extension of runways, construction and improvement of apron, construction of terminal and employee resident quarters, arrangement of drinking water and sewerage system, river protection, chainlink fencing etc in order of priority will be undertaken in 24 airfields appropriately located from tourism, trade and flight safety points of view from among the 38 airfields so far constructed in the Terai, hill and Himalayan regions, the works on airfields now under construction at Mugu, Kalikot and Rukum will be taken up so as to make them serviceable within five years. Programmes have also been included on the basis of feasibility studies for the construction of a few helipads in the hill and Himalayan regions having no other means of transport facility.

14. communication and Aviation support

Procurement, installation and renewal of communication and aviation equipment and their maintenance works will be undertaken in the airports located at Kathmandu, Nepalganj, Simra, Bhairahawa, Biratnagar, Mehendranagar, Pokhara and other Himalayan regions in the process of installation and maintenance of communication and aviation service equipment required for safe flight as per International civil Aviation Organisation (ICAO) convention.

15. Extension of Air Flight Information and Control Services

Efforts will be made to introduce air routes across the Himalayas and east-west international air routes within the Nepalese air space to make financial gains with the utmost use of airspace over the Kingdom. Similarly, programmes pertaining to providing point to point communication and air flight information to five additional domestic airports will be undertaken. Programmes to set up air flight information at Nepalganj and domestic aeronautical communication sub centre at Biratnagar will also - be undertaken. Also, programmes relating to the preparation of procedures upon setting up of aerodrome flight information zones in 23 airports and preparation of infrastructures meeting the concept of future navigation system of ICAO will be undertaken.

16. Extension of Fire Prevention and Life Saving Services

Programmes for procurement of mechanical equipment and spare parts, training and the construction of garage have been included to provide eight category services at Tribhuvan Airport and five category services required for the safe flight at Nepalganj, Bhairahawa, Pokhara and Biratnagar Airports in order of priority of the airports.

17. Development of Technical Manpower

Programmes have been incorporated to conduct training courses for 384 personnel in 27 groups subsequent to the procurement of training equipment and building construction of the civil aviation training centre. The programmes aim at producing medium and low level technical manpower within the country to keep pace, with the development of air transport.

18. Necessary Studies and Other Programmes for the Construction of the Second International Airport

Under this, construction works will be initiated upon the detailed project preparation on consideration of the existing probable places as well as the feasibility of other places for the second international airport. The private sector will also be encouraged for investment in this venture as far as possible. Besides, programmes have been incorporated for the economic and technical study relating to the execution of the construction of airport, procurement of survey equipment and arrangement of building, office equipment, technical workshop and communication equipment to strengthen the Department of Civil Aviation as a national aeronautical authority.

Implementation Arrangement

The aforementioned programmes will be implemented by Tourism Development Council and Ministry of Tourism in close coordination with other government agencies in order to develop infrastructure and new areas of tourism, to provide physical and other facilities to existing touristic spots, to make available necessary policy measures and incentives for the promotion of tourism and to correct policy drawbacks. Assistance of non-governmental agency and the private sector will also be solicited in these activities. Besides, local development committees will also be involved in the development of touristic spots and physical infrastructures. While the private sector will be prompted to play a lead role in the development of tourism promotion and tourism activity, the government will play a complementary role.

Expenditure Details

Rs. 3,719 million has been allocated in the Eighth Plan for programmes related to the tourism sector including civil aviation. Programmewise allocation of the expenditures and their sources of financing are estimated to be as follows:

Estimated Budget for the Eighth Plan

(in thousands of Rupees)

(a) Tourism Promotion Projects

S.N	Name of the Projects	HMG	Foreign Loan Assistance	Total Budget
1.	Promotion of Mountain Tourism	15,000		15,000
2.	International Contact and Market Management	25,000		25,000
3.	Tourism Research and Survey	3,563		3,563
4.	Production and Distribution of Publicity Materials	104,400		104,400
5.	Tourism Promotion	84,750		84,750
6.	Promotion of Cultural and Religious Tourism	49,650		49,650
7.	Extension of Tourism Services and Facilities	26,750		26,750
8.	Consolidation of Tourist Services	84,500		84,500
9.	Tourism Promotion Development Projects(ADB)	50,998	577,060	628,058
10.	Tourism Manpower Development	63,829		63,829
11.	Taragaon Development Committee	2,500		2,500
	Total	510,940	577,060	1,088,000

(b) Air Transport Projects

S.N	Name of the Projects	HMG	Foreign Loan Assistance	Total Budget
1.	Extension, Addition of Physical Facilities and Consolidation of Main Airports	940,000	1,006,100	1,946,100
2.	Construction and Extension of Additional Physical Facilities of Small Airports	275,400	-	275,400
3.	Communication and Aviation Support	132,160	19,840	152,000

4.	Extension of Air Flight Information and Control Services	12,500	-	12,500
5.	Extension of Fire Prevention and Life Saving Service	-	200,000	200,000
6.	Development of Technical Manpower	35,000		35,000
7.	Necessary Studies and Other Programmes Required for the Construction of the Second International Airport	10,000		10,000
	(a) Study and Survey	5,000		
	(b) Consolidation of the Civil Aviation Dept.	5,000		
	Total	1,405,060	1,225,940	7,631,000

Education and Culture

Introduction

Recognizing the important role of education for all round development of the country efforts to promote educational development in the country had been made since 1951, Although the present educational system in the country has been guided by the National Education System Plan implemented in 1971, several reforms have been introduced in the education system since then to respond to changing needs. However, a balanced development of all aspects of education in line with aspirations of the people and needs of the country could not be achieved due to too frequent changes in the education system and lack of a firm commitment to declared policies. The elected government established after the reestablishment of the multi-party democratic system constituted the National Education commission to recommend reforms in the present education system so as to make it more accessible, effective, work oriented, and conducive to technological development on the basis of thorough study and analysis of all aspects of the education system such as educational policy and decision making, structure of educational administration, management of education, curriculum and textbooks. The commission has submitted its report containing recommendations for educational development in line with Nepal's present changed context and aspirations of the people after conducting study and analysis of all aspects of the educational sector and considering suggestions given by the general public. The constitution of the Kingdom of Nepal(1990) has, for the first time (in the constitutional history of Nepal) introduced provisions related to rights of the people in areas of education and culture. various policies intended to serve as guidelines for development of education and culture have been enunciated in the Directive Principles and Policies of the State contained in the constitution .

Progress during the Seventh Plan

a review of the progress of major programmes implemented in the Seventh Plan period is as follows.

1. School Education

Total enrolment in the primary schools reached 2,788,644 in the last year of the Seventh Plan (1989/90) reflecting attainment of gross enrolment ratio of 107%. The number of primary schools reached 17,842. and that of primary school teachers reached 71,213. The proportion of girl students in total primary school enrolment was 36 percent.

Secondary level education is interpreted here to include the lower secondary level as well in line with the decision in 1988/89 to consider the VI to X grade structure as secondary level education. The total number of students at the secondary level by the final year of the Seventh Plan was 708,663. This reflects the gross enrolment ratio of 34.2% at the secondary level in that year. The proportion of girl students in total secondary enrolment was 29%. The number of secondary schools and secondary teachers had reached 5,917 and 22,820 respectively in the final year of the Plan.

During the plan period, a total of 280,450 adults were made literate. The government agencies made 130,450 persons literate, and the non-government agencies, 150,000 persons. The achievement levels indicate the need for further expansion of the literacy programmes.

The Seventh Plan had laid emphasis on qualitative improvements in education in order to maintain high educational standards. Besides, several policy measures were adopted for upgrading the instructional system. They included the improvement of curricula and textbooks, Provision of trained teachers, reforms in the supervision and examination systems, the creation of a competitive atmosphere in the education sector, establishment of model school of regional centers and arrangements for training and educational materials for upgrading the standard of teaching of Science, Mathematics and English. There was a plan to provide teacher training to all primary school teachers by the year 2000 A.D. However, within the plan period, the 150 hr. training was imparted to 11,554 persons and the in-service training to 394 teachers. Similarly, 2,239 teachers were trained through the Radio Education Teacher Training Programme and 988 teachers through the Women's Education Project.

As for curricular improvements, activities relating to the development and the revision of curricula were conducted from the beginning of the plan period. Arrangements were made for the introduction of a new supervision system in order to conduct effective supervision of the schools. Various activities aimed at raising quality of education and improvement of physical facilities of schools were carried out in various

districts of Seti zone conversed by the Education for Rural Development under the Seti Project, and in Jhapa, Dhankuta, Tanahu, Kaski, Dang and Surkhet districts under the primary Education project. Activities conducted during the plan period under the primary Education project were the establishment of 76 Resources Centres, rehabilitation of 782 schools, distribution of educational materials, teacher training, supervision, and reform of the examination system.

In the area of technical education a total of 642 students completed their training in the technical schools during the plan period.

2. Higher Education

2.1 Tribhuvan University

Various programmes with special emphasis on qualitative improvements in instruction have been carried out under Tribhuvan University for increasing the capacity of producing middle and high level manpower in the fields of agriculture, medicine, engineering and forestry in the country. The enrolment and production of trained persons in technical institutes during the plan period were as follows.

	Institute	Enrolment	Output
a.	Engineering	3,890	2,225
b.	Agriculture and Animal Science	3,762	2,235
c.	Medicine	3,715	1,982
d.	Forestry	1,228	981
e.	Science and Technology	23,757	-

2.2 Mahendra Sanskrit University

Mahendra Sanskrit University was established in the fiscal year 1986/87 with the objective of conducting teaching and research in Sanskrit along scientific and systematic lines, and to promote Sanskrit learning. The university has carried out teaching and research activities, edited rare and important hand written manuscripts and also conducted instruction on performance of religious rites. A total of 1931 students of Uttar Madhyama, Shastri and Acharya levels together completed their studies in the university during the plan period.

3. Archaeology

Programmes relating to preservation and renovation of historical monuments located at the Durbar Square areas of Kathmandu, Bhaktapur and Patan as well as in different parts of the country were carried out. Various environmental improvements in these areas were carried out as well. Preparation of systematic records of documents of historical importance and photographing of the documents were done. Similarly, inventory of religious processions, festivals and monuments was prepared. Activities for establishment of a museum at Surkhet were conducted. The preservation of Swayambhu and Gorkha Durbar area projects were implemented as priority projects and the achievements of these projects were in line with the targets fixed for the plan period.

Progress in the Fiscal Year 1990/91 and Estimated progress in the Fiscal Year 1991/92

Major achievements in the year 1990/91, and estimated progress in the year 1990/91, and estimated progress in the year 1991/92 are as follows:

1. School Education

A total of 2,925,820 students were estimated to have been enrolled in 18,681 primary schools in the year 1990/91, and the number of teachers was 74,849 in that year. Similarly, in the year 1991/92, the primary enrolment is estimated to have reached 3,072,111; the number of primary schools added in the year was 934, and that of primary teachers added was 3,010.

At the secondary education level (lower secondary and secondary together) it is estimated that a total of 817,407 students will have enrolled in 1991/92, the number of schools having reached 6,419 with 24,590 teachers.

The number of adults made literate in the year 1990/91 was 35,000; in the year 1991/92, a total of 158,850 adults were estimated to have been made literate through MOEC and other government programmes and non-governmental programmes.

Basic Teacher Training (150 Hours Package) was provided to 4359 primary school teachers in the year 1990/91. It is estimated that 4,970 primary teachers will have received the 150 Hours primary teacher training, and 1,800 primary teachers will have been trained through the Radio Education Teacher Training Programme in the Year 1991/92.

In the field of vocational education, 201 students were trained by technical schools under the Council for Technical Education and Vocational Training in the year 1990/91. It is estimated that 264 technical personnel would be produced by the technical schools in the year 1991/92.

2. Higher Education

Actual enrolments in the Institutes and Faculties and Campuses under Tribhuvan University in the year 1990/91, and enrolment targets for the year 1991/92 were as follows:

S.N.	Institutes/Faculties	1990/91	1991/92 Enrolments
		Enrolments	Targets
1.	Institute of Engineering	784	1,024
2.	Institute of Agriculture and animal Science	219	560
3.	Institute of Medicine	798	684
4.	Institute of Forestry	253	270
5.	Institute of Science and Technology	6,770	5,855
6.	Faculty of Law	3,647	2,860
7.	Faculty of Management	14,867	10,450
8.	Faculty of Education	3,563	3,800
9.	Faculty of Humanities and Social Sciences	24,009	21,650

Under Mahendra University 792 students were provided higher education in Sanskrit, and similarly 165 persons were provided training in religious rites in the year 1990/91. It is estimated that 635 students would be enrolled in different levels of Sanskrit education in the year 1991/92

3. Preservation of Archaeological and Cultural Heritage

Various activities aimed at preservation and renovation of archaeological, historical, religious sites and monuments and preservation and promotion of Nepalese history, culture and arts were carried out in the year 1990/91. These activities were expected to contribute to preserve national dignity. In the year 1991/92, various activities including panauti area monuments preservation project are being carried out.

Existing problems

The following problems in the education sector are identified on the basis of analysis of achievements during the Seventh plan period and the present status of education.

1. The national goal of universalization of primary education by the year 2000 A.D. Requires significant increase in girls enrolment. The lack of progress in this direction stands as a serious problem. Similarly, in view of the fact that as many as 60% people are illiterate, the present efforts to raise the literacy rate are very inadequate.
2. There has been a significant quantitative progress in education; this has not been matched by progress in raising the quality of education. The education system has been unable to contribute to meeting the needs of the rural areas; consequently, the education system has failed to promote the real development of the country. The lack of relevance in education is still a problem. The supervision system has not been effective.
3. The internal efficiency of school education is quite low. Because of the high drop-out and repetition rates, completion of primary education requires over 9 years on an average instead of the requisite period of 5 years. This has led to a tremendous wastage of scarce resources used in the education sector.
4. The financial burden of the government of supporting the education sector is increasing day by day. Primary education is already free, and secondary education is also being made free. In this process, much resources are involved. For promoting education of qualitative standards, efforts of the government are not alone sufficient.
5. On the one hand, there has not been an effective extension in the training of teachers, who have important role in raising the quality of education and, on the other; it has not been possible to make the teachers responsible towards their duties.
6. The present constitution of the country has provided opportunity to individuals belonging to every group, region, and community to acquire education. Making special education programmes more extensive and effective is quite essential in order to provide education to the disabled persons affected by various handicaps, who form a significant group of people .
7. There is a lack of definite policies and regulations regarding the involvement of the private sector in the education sector. Consequently, the schools operated in the Private sector are predominantly influenced by commercial motives.
8. The teacher pupil ratio in technical education is just 1:7. This has caused the unit cost of technical education very high, making technical education expensive.
9. The pressure of admission in campuses has become problematic, due to the ever increasing number of students seeking enrolment in higher education. On the other hand, as the university has to bear heavy administrative expenditures, it has not been able to make investment in instructional and academic development activities to the desired extent. At the same time, there is a need to make earnest efforts to raise the quality of higher education.
10. A great deal of work still remains to be accomplished in appropriate preservation and renovation of monuments and sites included in the world heritage list and recognized as of international importance. The same is true in the case of other archaeological, cultural, historical monuments and sites of national and international importance. At the same time not enough work has been done to promote language and dialects spoken in Nepal, and local culture.

Background of the Eighth Plan

In defining the objectives, targets and strategies in the Eighth Plan for the development of the education sector in keeping with the times, attention has been paid to the progress achieved in the education sector up to now, the current problems of the sector and the provisions relating to education and culture in the constitution of the Kingdom of Nepal, 1990. Special emphasis has to be laid during the Eight Plan period on the development and expansion of basic and primary education in view of the national goal of universalization of primary education, and the attainment of literacy rate of 67% by the year 2000 A.D. In view of the fact that qualitative improvements have lagged behind quantitative expansion in the education sector in the past, emphasis has to be given on improving the quality of education. For this, it is necessary to give stress of increasing the number of trained

teachers, improvement of physical facilities of the schools, curriculum development in keeping with the needs of the country, provision of textbooks, and regular and effective supervision of schools. At the same time, necessary measures have to be taken to maximize the participation of people of disadvantaged areas, tribal groups and women in education.

The government resources are inadequate to meet the growing demand and aspirations of the people for acquiring higher education. Thus, it seems necessary to extend university and campuses on the basis of people's participation. At the same time, It is necessary to implement reform measures for promoting qualitative improvement in higher education.

Against this background, and keeping in mind the main spirit of the Report of the National Education Commission, the objectives and policies of the Eighth Plan in the education sector have been determined.

Objectives of Education.

1. To contribute towards the development of the inherent talents and personality of every individual.
2. To prepare citizens who are loyal to the nation and nationality, dedicated to the preservation of country's sovereignty and independence, conscious of their rights and duties, and have high moral character.
3. To help each individual in preparing himself/herself for life in the modern world, and to promote socialization of the individuals.
4. To develop science and technology, knowledge, technical skills and competence needed for economic development of the country, and thereby prepare capable manpower needed for various national development areas.
5. To enhance the spirit of nationality and strengthen social unity by preserving and promoting the glorious national culture, arts, music, national languages and by promoting creativity and research.
6. To contribute to the conservation and proper utilization of the natural environment and national resources.
7. To help in the integration of communities and groups that have lagged behind in society in the national main stream.

Level Wise Objectives

On the basis of the above mentioned national objectives, the following level – wise objectives of education have been determined.

1. The objective of primary education is to make students literate with the ability to read and write and do basic computations, and to develop the habits of healthy living.
2. The objective of secondary education is to prepare self dependent citizens with the feeling of dignity of labor, loyalty to nation and democracy, awareness of environmental protection, strong moral character, and respect for culture, and social values and norms and to prepare students with necessary knowledge and skills for higher secondary education.
3. The objective of higher secondary education is to prepare middle level manpower who are capable of contributing to all round development of the country, and also to prepare students with necessary knowledge required for studies at Bachelors level.
4. The Objective of higher education is to promote intellectual development of the students and to prepare capable manpower and competent citizens needed for the country's development.

Policy

1. Basic and primary education will be developed and expanded keeping in view the national commitment to universalize primary education, and raise literacy rate to 67% by the year 2000 A.D.
2. People's participation will be encouraged for the establishment and expansion of preprimary classes.

3. The feasibility of introducing compulsory primary education will be studied. In the event of free and compulsory primary education being found to be feasible, local bodies (District and village/municipality) will be provided with necessary authority to implement the free and compulsory education system.
4. The Basic and primary Education Project will be implemented in all districts of the country on a phased basis in order to promote primary school physical facilities and develop the quality of primary education.
5. Primary teacher training centers will be established in different parts of the country under the Primary Education Development Project in order to promote qualitative development of education by upgrading the performance level of the primary teachers.
6. Special emphasis will be placed on increasing the participation of girls in education. Special programmes such as the distribution of school uniforms, provision of scholarships, and awards to schools attaining high female enrolments will be extended in order to attract girls to be admitted into schools, and to develop the habit of regular school attendance without dropping out. The policy of giving priority to appointment of female teachers in primary schools will be pursued and the appointment of at least one female teacher in a primary school will be made mandatory.
7. Emphasis will be laid on raising the effectiveness of teaching through teacher training, curriculum development and introduction of improved textbooks.(A reduction in drop out and repetition rate will be regarded as an indicator of the enhanced effectiveness.)
8. Non-formal education programmes will be launched on campaign basis for promoting literacy in the country. The government will implement a policy whereby medium and large scale industries will be required to implement non-formal education programmes for providing literacy to their illiterate workers on a compulsory basis. In such programmes, contents relating to raising awareness about environment, population, education, health and improved agricultural technology will be included besides literacy.
9. Non-formal education will be provided to out of school children of 6 to 14 years through programmes such as 'Cheli-Beti' and 'Sikshya Sadan.'
10. Special education programmes being conducted for the helpless, disabled, and handicapped persons will be further extended. Appropriate skill oriented activities will be emphasized in carrying out special education.
11. The participation of private sector and general public will be mobilized for operating additional secondary schools which will be determined on the basis of the number of students aspiring for secondary education and the ratio between primary and secondary schools. Secondary education will be made free on a phased basis.
12. Qualitative instruction at secondary education level will be ensured by developing curriculum and textbooks based on the real needs of the country's economy and daily lives of the people, and by providing necessary educational materials and trained teachers.
13. Teacher training activities will be expanded for raising the quality of instruction in Science, Mathematics and English Subjects.
14. The policy relating to school examination as well as examination management system will be reformed in order to make the examination system of high standard. Necessary measures will be taken for gradually decentralizing the SLC examination management. Appropriate measures will also be taken to standardize the examinations conducted at the end of the primary and secondary levels prior to the SLC examination.
15. Reforms will be introduced in the organizational structure of the Ministry of Education and Culture, and in the school supervision system in the context of changed context. The use of Resource Centre in supervision system will be institutionalized.
16. A highly competitive environment among schools for attainment of qualitative development in education will be created and the system of rewarding schools accomplishing high standards of instruction on the basis of evaluation of performance of schools will be continued.
17. Appropriate measures will be taken for raising internal efficiency of school education.

18. The establishment of educational institutions in the private sector will be encouraged for the purpose increasing opportunities of school education.
19. Necessary measures will be taken up for developing distance education system in order to supplement the formal school education for meeting the growing demand for education.
20. Higher secondary schools will be established at local level to meet the growing social demand for higher education.
21. School Curriculum will be made relevant and more functional.
22. Appropriate basic and middle level manpower needed for rural and industrial development will be produced by establishing additional technical schools and vocational training centers in different parts of the country.
23. Manpower production activities will be carried out with a view to striking a balance between demand and supply by establishing close and effective coordination among agencies producing and using the middle level technical manpower. The Technical Education and Vocational Training Council will perform the coordinating functions in this regard.
24. Policies aimed at making higher education institutions economically self dependent will be pursued in order to reduce pressures on government resources for higher education.
25. The participation of private sector and non-governmental agencies will be encouraged in the establishment and management of campuses providing higher education.
26. Necessary physical facilities will be developed for conducting practical works aimed at promoting the standards of science and technical education.
27. Research activities aimed at making education more relevant to country's needs will be encouraged.
28. A policy of establishing medical and engineering colleges with involvement of private sector will be pursued in order to increase the supply of medical and engineering manpower in the country.
29. With a view to implementing the concept of multiple universities, encouragement will be given to establish university in the private sector; and well endowed higher education campuses under Tribhuvan University located out side Kathmandu could be converted into university with the participation of the private sector. At the same time, in view of the felt need for establishing an agricultural university, feasibility study of such university will be conducted.
30. His Majesty Government will carry out preservation and renovation of historical, archaeological, religious sites, areas, monuments of national and international importance. Local agencies and groups will be encouraged to carry out preservation and development of other historical monuments and religious sites.
31. Emphasis will be laid on the preservation and promotion of languages, literatures, scripts, art and cultures of different ethnic groups and communities residing in the country.
32. Dances, music, and festivals representing the cultures of all ethnic groups and communities as well as their languages and scripts will be promoted.
33. Sculptures, paintings, historical documents, stone engravings, hand written manuscripts and other archaeological materials will be preserved and development of art will be emphasized.
34. As provided for in the constitution as a fundamental right, primary and basic education may be provided in national languages. Necessary measures will be taken to provide technical assistance in infrastructure development such as preparing educational materials and providing teacher training needed for the operation of primary schools in such national languages.
35. The establishment and development of libraries will be emphasized in order to develop reading habits for self development of persons of all ages, to help students in formal and non-formal education systems, to further enhance their knowledge through reading of text materials, and to promote the collection of information and skill development.

Physical Targets of the Education sector in the Eighth Plan

1. Primary Education

Primary education (grade I-V) facilities will be provided to 90% of actual primary school age group (6-10 years) children. The gross enrolment ratio at the primary level is expected to go up to 121% . In order to attain this goal 2025 additional primary schools will be established, and the provision of additional 8000 teachers will be made.

2. Secondary Education

Secondary education (grade VI-X) facilities will be provided to 45% of the 11 to 15 years age group children.

3. Higher Secondary Education

Higher secondary education (10+2 Education programme) will be introduced in 125 secondary schools of the country.

4. Non-formal Education

The goal is set at attaining literacy rate of 60% by the end of the plan period. For attaining this 1.4 million illiterate persons will be made literate through non-formal education programmes.

5. Teacher Training

Teacher training facilities will be provided to 35,000 primary school teachers during the plan period. Further, 6000 secondary school teachers will be provided in-service training in English, Mathematics and Science Subjects.

6. Technical Education

A total of 2595 trained persons of basic and middle level will be produced in areas of agriculture, health and construction through the technical schools.

Priority

1. To develop and extent basic and primary education.
2. To increase opportunities of technical education and vocational training.
3. To raise the quality of education by enhancing the effectiveness of instructional systems.
4. To extend the institutions providing higher education and to expand facilities for study in technical subjects.

Programmes of the Eighth Plan

1. Primary Education

The national goal in primary education is to provide primary education to all children of 6 to 10 years age group by the year 2000 A.D. In line with this goal, 90% of 6-10 years age group children will be provided with primary education (I-V grades) facilities. It is estimated that gross enrolment ratio will reach 121% on attainment of the above net enrolment ratio of 90%. For attaining this goal, 2025 additional primary schools will be established, and 8,000 additional teachers will be provided.

In order to facilitate the universalization of primary education, free textbook distribution will be continued for all students of I-III grades, for all students of IV-V grades in 18 remote districts, and for all girl students of IV-V grades in 57 districts of the country.

In view of the fact that girls, enrolment in primary education is still low, the existing programmes of providing scholarships and school uniforms intended to encourage girls admission in schools will be continued. Further, girls who are unable to attend formal schools will be made literate through non-

formal programmes under the Women Education Programmes and they will be encouraged to be admitted in formal schools. Arrangements will be made to appoint at least one female teacher on a compulsory basis in a primary school.

In order to upgrade the quality of primary education and to make the contents of teaching relevant to the changed democratic context, primary school curriculum will be revised, and new textbooks will be developed accordingly.

Compulsory primary education schemes may be launched on pilot basis by the local bodies with their own initiative and on the basis of their own demand.

2. Basic and Primary Education Project

The Basic and Primary Education Project is being implemented from the first year of the plan to provide continuity to the efforts to raise quality of primary education that were initiated under the primary Education Project launched in 1986. The project will be implemented all over the country in phases. Programmes intended to raise the quality of primary education, such as curriculum and textbook development, preparation and distribution of educational materials, rehabilitation of primary schools, and establishment of Resource Centres will be implemented under the Project.

3. Primary Education Development Project

The Primary Education Development Project will be launched to ensure institutional development of training provided to the primary school teachers. Nine Regional Primary Teacher Training Centres will be established under the Project, and these Centres will be used for extending primary teacher training. Besides, a National Education Development and Training Centre will be established to provide training in educational management.

4. Secondary Education

The expansion of secondary education is deemed necessary in view of the growth of primary education and increased aspirations of the people for acquiring secondary education. Secondary education facilities will be made available to 45% of the 11 to 15 years age group children.

At present, secondary education facilities are provided by the government supported secondary schools and the private sector schools. During the plan period 900 additional secondary schools will be established, and provision will be made for 5404 additional teachers.

In 1991, secondary education at grade VI was made free. Gradually, Other grades of secondary education will also be made free.

Various measures will be taken up for raising the quality of secondary education. Secondary school curriculum will be revised in keeping with the changed context and the needs of the country. New textbooks and teacher guides will be prepared. Teacher training in Science, Mathematics and English Subjects will be carried out

Training workshops will be organized for school supervisors with a view to improving the supervision system.

5. Higher Secondary Education

The aim of higher secondary education (10+2 system) is to provide necessary skills needed for employment on completion of this level of education, and to prepare the basis for study at Bachelor's Level. The long term goal is to provide higher secondary education in general subjects, Science, Vocational/technical areas and Sanskrit.

Higher secondary education will be provided in 125 secondary schools during the plan period. Science teaching will be conducted in 25 secondary schools, and general subjects will be taught in 100 secondary schools. By the end of the plan period, the capacity of enrolling 40,000 students in higher secondary education will be developed.

6. Adult Education/Non-formal Education

It is recognized that illiteracy is a great handicap in promoting development. The national goal of reducing the illiteracy rate from the present 61% to 33% by the year 2000 A.D. has already been laid down in order to speedily wipe out illiteracy from the country. In order to achieve this goal, literacy programmes will be launched as national campaigns.

With a view to raising the productivity of the work force represented by the adults and thereby raise their standards of living, knowledge and skills as well as information on agriculture, health, cottage industry, environmental protection and population education will be provided to the adults along with the instruction on literacy skills. For achieving this objective, functional literacy programmes will be conducted along with running the literacy classes in all districts of the country and a total of 1.4 million illiterates will be made literate during the plan period. Necessary educational materials will be developed, produced and distributed to conduct the literacy programmes.

Training will be provided to literacy instructors. The Ministry of Education and Culture will make available literacy text materials to different government and non-governmental agencies engaged in adult education programmes at cost price. The institutional set up from the central to district and local levels will be strengthened for the implementation of the programmes.

Non-formal education will be provided through 'Cheli Beti' and 'Shikshya Sadan' classes to children of 6-14 years, who have been unable to attend primary schools for various reasons and they will be encouraged to join formal schools on completion of their study in these classes.

Post literacy programmes will be conducted for the newly literate persons numbering 359 thousands. For this, along with the reading materials the radio and press media will also be used.

Adult literacy classes and Sikshya Sadan classes will be conducted in the districts covered by the Basic and primary Education Project.

7. Teacher Training

Various in-service teacher training programmes will be carried out during the plan period with the aim of raising the quality of school education. Training facilities will be provided to 35 thousand primary school teachers during the plan period.

In-service training in English, Mathematics and Science will be conducted for 6000 secondary school teachers.

Training of school supervisors, headmasters and educational administrators in educational management will be conducted under the primary Education Development Project.

Pre-service and long term teacher training activities will be conducted through the faculty of Education, Tribhuvan University. The agencies under the Ministry of Education and Culture will execute in-service training programmes.

8. Curriculum and Textbook Development

The curricula of primary and secondary levels will be revised to make them reflect the realities of the democratic setup; the textbooks will be revised and developed accordingly. New textbooks of grade I will be introduced all over the country in the first year of the plan. New textbooks for other grades of the primary level will gradually be put into use. Contents relating to the promotion of awareness about environmental protection will be included in the curricula and textbooks

Workshops will be organized for teachers and supervisors in order to enhance the effectiveness of teaching in schools. The printing and distribution of free textbooks for the primary level will be arranged. Workshops for subject specialists and supervisors will be organized for the development of new textbooks needed for augmenting the efficacy of primary and secondary education. Teacher guides will be prepared for making the teaching-learning practices more effective. The curriculum and the educational magazines will be published. The present system of free textbook distribution will be maintained.

9. Radio Education Teacher Training

The Programme of 150 hour basic teacher training package through the medium of radio broadcasts, for the untrained S.L.C. in-service teachers will be continued for the present.

Educational programmes for the general public will be conducted through radio during the plan period. At the same time, various evaluation seminars will be organized for teachers; educational programmes will be transmitted through television; and various audiovisual materials will also be produced. During the plan period, the Radio Education Programme and the audiovisual programme will be integrated to develop a Distance Education Centre.

10. Women's Education

Various programmes will be conducted with the aim of attaining universal primary education, increasing enrolment of girls in schools, encouraging a maximum number of educated women to take up teaching profession, and encouraging a larger number of girl students to complete secondary education. Programmes, such as female teacher training, scholarship distribution and school uniform distribution will be conducted during the plan period.

11. Scholarships

Various Scholarship programmes such as Scholarships for the poor but intelligent students, the King Mahendra Scholarship, and miscellaneous Scholarships as well as Scholarships for foreign students in Nepal, Scholarships under the Colombo Plan, and SAARC Chair fellowships will be carried out. Besides, necessary action will be taken to set up a National Scholarship Fund.

12. Special Education

Provision will be made for education and training of the disabled in accordance with the Directive Principle of the Constitution of the Kingdom of Nepal, 1990, that the government will make necessary arrangements for education, health and welfare of the disabled. As far as possible integrated special education programmes will be developed for all disabled persons. The curriculum of special education will be revised keeping in view the type of disability and peculiar problems of the disabled persons. Disabled students will be encouraged to participate in vocational training and technical education. The manpower required for implementing special education programmes will be produced. All education provided to the disabled will be made free. Arrangements will be made for conducting special education classes in additional 74 schools.

13. Educational Statistics

The data necessary for framing educational policies and preparing educational plans will be collected and analyzed. Educational Statistics Reports will be published. The Statistics Section of the Ministry of Education and Culture will be strengthened with a view to collecting and analyzing educational statistics more systematically.

14. Population Education

Under the population Education Project that has been in operation with the aim of raising awareness about the problems created by population growth, activities relating to the incorporation of population education contents in the curricula of school education, higher education and adult education will be carried out. Trainings will be conducted for the teachers of population education. Programmes to raise awareness in the public about population issues will be conducted through information and communication media. Special population education programmes will be carried out for the female groups.

15. Physical Education and Extra Curricular Activities

Various activities will be conducted at school, district and regional levels for promoting physical and mental development of the students. The activities to be undertaken are conducting physical education in schools, and organizing sports and co-curricular activities on a competitive basis, training of physical education instructors and students, and production and distribution of sports materials. Curriculum and textbooks on physical education and co-curricular activities for students of pre-primary grades and students of grade I to X will be developed and updated. Similarly, teacher guide books will be developed and revised.

16. Technical Education

Technical Schools have been established in different parts of the country under the Council of Technical Education and Vocational Training to produce basic and middle level technical manpower locally at the place of requirement for carrying out various development works and to promote employment opportunities to the Youth by providing job oriented training. During the plan period, the technical schools will be strengthened keeping in view their optimum, efficacy in terms of their cost effectiveness. New technical schools will be established in Mustang of Dhoulagiri Zone, Dang of Rapti zone, Doti of Seti zone, and in Bheri Zone. A total of 2595 basic and middle level manpower in agriculture, health and construction will be produced through existing and new technical schools to be established during the plan period. A total of 2034 persons will be trained through short term course to be run by the technical Schools.

Technical Schools	Production Target	
	Regular Training (Persons)	Short term Training (Persons)
1. Technical School, Dhankuta	320	200
2. Technical School, Lahan	345	150
3. Technical School, Jiri	400	300
4. Technical School, Balaju	960	1000
5. Technical School, Jumla	350	150
6. Technical School, Seti	220	234
Total	2595	2034

Five Vocational Training Extension Centres will be established during the plan period to conduct short term training.

Community Training Centres will be established in Lamjung and Tanahun, and 480 person will be provided short term technical training.

A Technical Instructor Training Institute will be established at Sanothimi and 380 technical instructors will be produced during the plan period.

A total of 3,000 persons will be provided opportunity of skill testing under the skill testing programme, and those successful will be awarded skill test certificates. Skill standards will be prepared in 50 different technical and Vocational areas.

Preliminary works will be conducted for establishing one technical school each in Mechi and Mahakali zones.

The Butwal Technical Institute will be run as an institution affiliated with the council for Technical Education and Vocational Training (CTEVT).

A headquarters building for CTEVT will be constructed at Sanothimi.

17. Development of Educational Materials

The Janak Educational Materials Centre will prepare educational materials like textbooks, exercise books, science materials, posters, charts according to the educational policy and programmes of the government. A total of 20 million units of textbooks, and 100 million units of exercise books will be produced during the plan period. Textbook distribution will be conducted through regional offices of the Centre. A programme of installing press machines and equipment for enhancing the production capacity of the Centre will be executed. Similarly, the construction of press building and storage building will be carried out.

Higher Education

Enrolments in higher education will be increased by increasing the number of universities and institutions of higher education in different parts of the country during the plan period. The involvement of private sector and non-governmental agencies in higher education will be maximized in order to reduce the pressure on government resources.

1. Tribhuvan university

The following policies will be pursued by the Tribhuvan University during the plan period.

1. Stress will be laid on enhancing the capacity of preparing middle and higher level manpower in areas of agriculture, medicine, engineering, forestry, science and technology in the country itself, and on raising the quality of instruction. Additional subjects will be incorporated, and the level of instruction programmes will be raised in technical institutes.
2. With regard to the programmes of research centers under the university, priority will be given to conduct studies that would help to raise the standards of higher education, help to identify the needs for raising national productivity and help to promote national unity.
3. With regard to the extension of general higher education, the policy will be to encourage people's participation in establishing new campuses, to run new courses and upgrade the level of teaching in T.U. Campuses, if they are found feasible and people's participation is ensured. People's participation will also be encouraged in the extension of technical education.
4. Emphasis will be laid on strengthening the existing T.U. Campuses and making improvements in them instead of increasing the number of T.U. run campuses.
5. The T.U. will run all its instructional programmes according to a calendar of operations which will indicate admission date, length of instruction period, examination date, date of publication of results, all of which will be predetermined. Management of all Institutes and Faculties of the University will be strengthened and reformed in order to ensure their proper functioning according to the calendar of operations.
6. The standard of teaching will be raised so as to achieve international recognition of degrees awarded by the university.

1.1 The Institute of Agriculture and Animal Science

This institute has been conducting programmes of producing necessary manpower for execution of agricultural development activities; besides it has been carrying out training programmes, agricultural extension works and research activities. During the Eighth plan. Programmes will be undertaken for strengthening and improving Bachelor level programmes conducted by the Institute. With a view to laying down prerequisite infrastructure for the establishment of an Agriculture University, postgraduate programmes will be launched in some subjects on the basis of the needs of the country and the availability of capable manpower and physical facilities in the Institute. The Lamjung Campus under the Institute will be developed as an Agricultural Centre in the middle hill region (With emphasis on horticulture), and also as a Centre for environmental research. Similarly, Paklihawa Campus will be developed as Terai agriculture (With emphasis on Sugarcane and Cotton) center and also as a Centre for environmental research. The agricultural extension programme of Ministry of Agriculture in Chitwan will be integrated with the pilot agricultural extension programme of the Institute. The extension programme will be expanded and necessary coordination will be established with the concerned agency for this purpose. Besides, pilot agricultural extension programmes will be launched on a smaller scale through the Lamjung Campus and Paklihawa Campus as well. Consultancy services in the field of agriculture will also be started during the plan period.

For improvement of physical facilities in the campus new construction works as well as repair works will be carried out. At the same time, laboratories in some subject areas will be equipped fully from the stand point of national standards, and these will be developed as leading laboratories.

1.2 Institute of Engineering

This Institute has been producing Technical manpower in Engineering and related fields. During the plan period, post graduate (diploma) courses in Civil Engineering and Bachelor level courses in Electrical Engineering, Electronics, Mechanical Architectural Engineering will be introduced in the pulchowk Campus. The Certificate level courses on Air conditioning and Refrigerator now being run in the pulchowk campus will be shifted to the Thapathali Campus. A center for research on water resources will be set up in the pulchowk campus. Problem oriented studies relating to rural development will be carried out and the consultancy services will be strengthened. The trade level courses in the Western Regional Campus will be converted into sponsored programme; enrolment in trade courses will be reduced, and that in certificate level course will be increased. Certificate level courses will be conducted in the Purwanchal Campus preparatory work will be conducted for establishing certificate level campus in the mid-western region.

1.3 Institute of Medicine

The Institute has been contributing towards attaining self dependence by the country in producing manpower needed for the expansion of health service in the country. For this purpose, the Institute has been conducting courses from trade level to postgraduate levels. During the plan period these programmes will be strengthened, and course leading to M.D. in general medicine, D.C.P. in Pathology, postgraduate Diploma, Postgraduate in Nursing, Postgraduate degree in Health Administration will be introduced. Bachelor level courses in Hearing Aid and B. Pharma, and Certificate level course in Dentistry and optometry will be conducted. A medical recorder course will also be conducted.

Necessary physical facilities will be provided and equipment installed for the development of basic-medical sciences. An academic building, a laboratory building, a residential building and an Ayurved hospital will be established and started for the Ayurved Campus. In the teaching hospital, further 200 beds will be added, and the OPD building extension works will be completed. In the process of expansion of the hospital, extension works on cafeteria, doctors' residence, laboratory building, residential building, and hospital laboratory will be carried out. An equipment repair and maintenance division will be set up in the Teaching Hospital. Also, a gas plant for producing gas for medical purposes will be built, and necessary equipment will be installed. Health Learning Materials Centres and Educational Support Department will be consolidated. Practical education and nursing education will also be strengthened. Further, a B.P. Ophthalmic Centre will be established.

1.4 The Institute of Forestry

To fulfill the aim of promoting the national interest, the Institute will prepare manpower required for the preservation of wild life, land conservation, prevention of land erosion by rivers, soil conservation, forest conservation and land use. the present Certificate and Bachelor level courses in the Institute will be strengthened. A postgraduate programme in forestry will be launched. A new campus will be established either in the Eastern Region or in Mid-Western Region, and a Forestry Research Centre will be established in Pokhara. Construction of Guest House, residence for the Dean, health center building, teachers' living quarters, cafeteria, post office and bank buildings will be completed. A girls' hostel will be constructed in Hetauda Campus. The curriculum will be reviewed, and the textbooks and laboratory manuals will be prepared accordingly.

1.5 Institute of Science and Technology

During the plan period the Institute will make necessary arrangements for the fulfillment of the need of competent scientists and technical manpower by enhancing the teaching capacity of the Central Department of the Institute and the Campuses under the Institute. Further, it is aimed that the Institute will gradually introduce the teaching of additional subjects such as Computer Science, Microbiology, Environmental science and Bio-Chemistry. The Institute will aim at establishing campuses in science and technology on a regional basis with the provision of necessary physical facilities through public participation; similarly, higher levels courses will be added in the existing campuses. Postgraduate programmes will be conducted in Birgunj, Pokhara, Kathmandu and Janakpur, and Bachelor level programmes in Nepaljunj, Mahendranagar, Butwal, Bhaktapur, Jhapa, and Siraha. Certificate level programmes being conducted in Kathmandu, Bajlung, Birtnagar, and Polhara will be further extended. Besides, the construction of class room buildings, hostels, and staff living quarters will be carried out according to the need. Further improvement of physical facilities such as repair maintenance of laboratory, water and electricity facilities will be carried out.

The targets of enrolment and output of technical higher education is given in

Table 1

Level wise Enrolment and Output by Year

in Technical Institute

Institute	Fiscal year	Basis Level		Certificate Level		Bachelor Level		Post-graduate	
		Enrolment	Out put	Enrolment	Out put	Enrolment	Out put	Enrolment	Out put
INSTITUTE OF AGRICULTURE AND ANIMAL SCIENCES	1992/93			90	45	150	114	10	
	1993/94			90	60	150	113	15	
	1994/95			90	68	150	113	25	8
	1995/96			90	68	150	113	25	12
	1996/97			90	69	150	113	25	12
INSTITUTE OF ENGINEERING	1992/93	320	310	620	410	96	88		
	1993/94	224	210	620	462	144	88	10	
	1994/95	160	116	624	592	192	88	10	
	1995/96	96	90	648	596	226	88	10	
	1996/97	96	90	672	596	240	88	10	
INSTITUTE OF MEDICINE	1992/93	300	300	328	295	104	92	32	32
	1993/94	300	300	328	295	104	92	32	32
	1994/95	300	300	328	295	104	84	32	32
	1995/96	300	300	328	295	104	84	32	32
	1996/97	300	250	328	295	104	84	32	32
INSTITUTE OF FORESTRY	1992/93			221	175	40	30		
	1993/94			221	175	40	30	10	
	1994/95			221	175	40	30	10	
	1995/96			220	175	40	30	10	10
	1996/97			220	175	40	30	10	10

1.6 Centre for Economic Development and Administration (CEDA)

Research project in the areas of planning and economic policy, rural development, population and human resources, administration management system, environment and resources development will be carried out by this research center.

1.7 Centre for Nepal and Asian Studies (CENAS)

Research projects in the areas of Nepalese culture and heritage, social development and change, south and East Asian studies, studies of Nepales political developments will be carried out by this research center.

1.8 Research Centre for Applied Science and Technology (RECAST)

The center will execute projects relating to food processing, fibre development, natural dyes, development of construction materials, development of indigenous products, development of alternative energy, development of instrumentation technology, and modernization of traditional technologies.. promotion of research works leading to M.Sc. and Ph.D Degree will be attempted as far as possible with a view to developing manpower needed to conduct studies in the areas of applied science and technology.

1.9 Research Centre for Educational Development and Innovation (CERID)

The center will carry out research research projects on educational planning and management, financial management of education systems, curriculum and instruction, higher education, non-formal education for rural development, educational technology, educational statistics, feasibility studies and educational evaluation. A building will be constructed for this center within the plan period.

1.10 The Faculties of Law, Management, Education, Humanities and Social Sciences

Programmes under the faculties of Law, Management, Education and Humanities and Social Sciences will be strengthened. Development and expansion of higher education in these areas will be carried out with public participation and according to the regional needs. Further, research and academic development will be promoted in these areas. The estimated enrolments projection in the above four Faculties and in the Institute of Science and Technology together is as follows.

Table 2
Estimated Enrolment Targets
(Tribhuvan University)

Fiscal Year	Basic/ others	Certificate Level	Bachelor Level	Post-graduate level	Total
1992/93	500	124,800	38,250	12,450	175,000
1993/94	500	135,300	40,750	13,350	189,900
1994/95	500	146,800	43,250	14,950	205,000
1995/96	500	159,800	48,250	15,450	224,200
1996/97	500	172,300	52,300	16,950	242,050

Mehendra Sanskrit University

The Mahendra Sanskrit University was established for systematic development of Sanskrit teaching to the highest level, in order to promote Sanskrit learning which is the main source of our civilization, culture, arts, philosophy and traditional values and norms.

During the plan period the academic, administrative and management aspects of the university will be consolidated, curriculum for ayurved education will be developed and curriculum and textbooks of Sanskrit education will be revised. At the same time teaching and research programmes will be further extended.

Scholars with profound knowledge as well as general manpower in Sanskrit language will be developed, and contacts with international universities will be established. The university will establish one Sanskrit Campus in each zone of the country. In line with this objective, a Sanskrit Campus of Uttar Madhyama level will be established in each of the zones of Mechi, Narayani, Gandaki, Bheri and Seti with public participation. Similarly, a campus for teaching Buddhist philosophy will be set up in Lumbini. Establishment of private Sanskrit Campuses will be encouraged.

With a view to making the university financially self dependent, income generating construction works will be carried out on the land in Balmiki campus, and in the hostel building at Durbar Marg, Kathmandu. Further, a master plan will be prepared for making use of the land in Dang for income generation. The plan will be gradually put into practice. In executing the plan, attention will be given to environmental conservation. In order to enhance the prospects of long term income generation, afforestation works will be carried out.

The enrolments at different levels in Sanskrit education will be as follows

Table 3

Level	1992-	1993-	1994-	1995-	1996-	total
	93	94	95	96	97	
Uttar Madhyama	705	785	885	980	1985	4440
Shastri	275	305	326	355	385	1646
Acharya	120	120	120	130	142	631
Total	1100	1210	1331	1465	1612	6718

Four month Sanskrit training programmes will be conducted at different places for those appearing in or having successfully passed the S.L.C. examination.

Archaeology

The archaeological development programme aims at the preservation, renovation, study and promotion of monuments and sites included in the world heritage list as well as other historical, religious, cultural monuments and sites. It is expected that the archaeological development works will also promote tourism by making the monuments and sites attractive to the tourists. With this objective, the sites, areas, monuments of historical, archaeological and religious importance will be preserved and promoted. At the local level, traditional public resting places (Pauwa Pati), monuments and religious places will be preserved and developed with the participation of local agencies and communities.

Activities to be carried out during the plan period under the conservation of archaeological sites programmes include the following: improvements and development of museums under the Department of archaeology, establishment of Martyrs Memorial Museum, Preparation of inventory with photographs of idols and stone water spouts (Dhungedhara) in villages around Kathmandu valley, renovation of Charumati Vihar, Vishnu Mandir and Vaidya satal situated in Pashupati area construction and renovation works in the Nuwakot Durbar and Bhaktapur Durbar areas, conduction of seminars on protected archaeological monument sites, publicity, publication of books and preparation of photographic records of archaeological objects.

under the Swayambhu preservation programme, activities relating to renovation, construction, repairs of Bahal, Chaitya, Mahabihar rest places (Satal, Pati), Pond, and Shantipur will be carried out as needed.

Under the Gorkha Durbar conservation programme, the remaining works of renovation of Gorkha Durbar and lower Durbar (tallo Durbar) will be carried out, and the lower Durbar (Tallo Durbar) will be developed as a historical museum. A statue of Late King Prithivi Narayan Shah the great, will be erected in the Gorkha Durbar area. the site for the installation of the statue will be prepared a long with carrying out repair and maintenance of temples, Choutaras, and ponds in the area.

Under the Bhaktapur monument preservation programme, repair and maintenance works of the monuments preserved and renovated under the Bhaktapur Development project will be carried out. Besides, other

monuments in the Bhaktapur district will also be repaired and maintained. A map of Bhatapur will also be prepared.

Under the Kathmandu Valley Cultural Heritage Protection Master plan, activities such as the preparation of master plan for preservation of Patan Durbar and other development works in Lalitpur, renovation of Keshav Narayan Chowk of Patan Durbar, establishment of metal crafts museum, and renovation of Ebaha Bahi will be carried out. Similarly, under the Kathmandu Valley preservation trust, selected monuments in the Kathmandu Valley will be renovated, and various other monuments will be preserved. Further, under the trust, a project for Kathmandu urban area heritage protection and development will be executed. Archaeological excavation works will be conducted in Mustang in the Mountain region, and in Simrongadh of the Terai region.

Under the Panauti area monument preservation programme, renovation works of Indreswori Mahadev temple of Panauti and other temples will be completed. Sewerage system in the Panauti town area will be developed, and the secondary school building will be extended and improved.

National sports Council

Necessary facilities will be developed for enhancing the participation of youths in games and sports. Physical infrastructure development works will be conducted under the National Sports Council during the plan period. Various programmes of conducting sport activities will be carried out.

Other Social Programmes

1. Royal Nepal Academy

Various activities will be launched by the Royal Nepal Academy for development of art, culture and literature of Nepal. Activities to be conducted during the plan period include the following: Construction of Birendra Art Gallery, organizing of cultural festival, expansion and improvement of the Library of the Academy, improvement of display platform, preparation of technical terms and nomenclature in Nepali language, launching of fellowships in history of Nepalese literature and establishment of contact point for regional literature and culture, development of children's literature, publication of dictionary of Nepalese language for local use, translation of Nepalese literary works into English, translation of world literary works into Nepali, and cultural exchange between Nepal and SAARC and other neighboring countries. In addition, study and development works will be carried out for promotion of languages, literatures, scripts, arts and cultures of various ethnic groups.

2. Cultural Corporation

The corporation will conduct activities relating to search, compilation, and promotion of cultures and arts of different ethnic groups and will organize live displays of the ethnic culture and arts with the aim of promoting cultural development of various ethnic groups in the country. A new national theatre building will be constructed within the available resources to replace the old theatre building which is now in dilapidated condition.

3. Pashupati Area Development

A master plan for the development of the pashupati area has been prepared and the pashupati area. Development Fund has been established for planned maintenance, conservation and development of the pashupati area which boasts the temple of Lord pashupati Nath endowed with the heritage of religious, cultural and archaeological significance. Various agencies such as HMG ministries, corporations, banks, and non-governmental organizations, will carry out the activities relating to physical and cultural development, and the development of infrastructure such as transport and electricity as mentioned in the Master Plan.

4. Lumbini Development

Activities to be implemented by the Lumbini Development Fund during the plan period in the process of implementation of the Lumbini Master plan are related to infrastructure development in the three mile perimeter of Lumbini, the holy birth place of Lord Buddha. Under the infrastructure development programme, the programmes to be implemented are: the installation of water distribution system, construction of metal roads in and around the Lumbini project area, construction of three bridges and four culverts, arrangement of sewerage system, electrical installation and telecommunication system. The development of these facilities will

contribute to the development of the Lumbini area as international Buddhist pilgrimage center and cultural tourism center. The above activities will be implemented by the related ministries and agencies.

5. Royal Nepal Academy of Science and Technology (RONAST)

Various activities are being carried out by RONAST for the development of science and technology in view of the indispensable need of proper use of science and technology in speeding up the economic development of the country. During the plan period, RONAST will carry out programmes relating to the development and extension of science and technology, the creative of a favourable environment for the promotion of public awareness, the implementation of science communication project, and the establishment of a center for science and technology studies. Further, RONAST will carry out projects for enhancing national capacities in source and technology areas and for promoting information through extension activities. It will also conduct several research activities. Besides, programmes will be carried out to strengthen the Central Forensic Laboratory.

6. The King Tribhuvan Memorial

Various programmes as envisaged in the master plan are being carried out for the development of King Tribhuvan Memorial site at Thankot to make it reflect Nepalese culture, to enhance its natural charm, and to develop it into a lovely peaceful, place of entertainment. The memorial site is expected to attract tourists as well. Various programmes will be carried out for environmental protection and improvements in and around the memorial site in accordance with the Master plan.

Implementation Arrangements

1. Arrangements will be made for maximum involvement of the private sector and people's participation in the expansion of basic and primary education, secondary education, and higher secondary education.
2. Compulsory primary education will be introduced on experimental basis at the initiative of local agencies in their own areas and on their own demand.
3. The government will contribute grants to cover 40% of the costs of the development of physical facilities of primary schools under the Basic and Primary Education Project and the Primary Education Development Project. The remaining portions of the cost involved will be mobilized through public participation.
4. Literacy programmes will be conducted by adopting a campaign approach in order to reduce the illiteracy situation obtaining in the country.
5. The Faculty of Education of Tribhuvan University will implement pre-service teacher training programmes, and long term training programmes. In-service teacher training programmes will be executed through the agencies of the Ministry of Education and Culture.
6. Private sector participation and people's participation will be encouraged in the establishment of new campuses for providing general higher education.
7. The government will carry out preservation and development of historical, archaeological, and religious sites, areas, and monuments of national and international importance with the participation of local agencies. Local agencies and community groups will be encouraged to take up preservation and development of other sites and monuments.
8. Various activities for preservation and promotion of languages, literatures, arts, and cultures of different ethnic groups and communities will be taken up by Archaeology Department, Royal Nepal Academy, Cultural Corporation and various non-governmental agencies.

Details of Expenditure

An allocation of Rs. 17,290 million has been made for the Education sector in the Eighth Plan.

Budget Estimates for The education Sector in The Eight plan

(in thousands of Rupees)

S.N.	Name of the Project	Total Budget
1.	Primary Education	8,000,000
2.	Basic and primary Education Project	1,170,000
3.	Primary Education Development Project	410,000
4	Secondary Education	200,000
5	Higher Secondary Education	100,000
6	Adult Education	252,550
7	Technical Education	680,000
8	Educational Statistics	2,750
9	Population Education	13,500
10	Women's Education	97,500
11	Scholarships	23,000
12	Curriculum and Textbooks	550,500
13	Radio Education	16,700
14	School Broadcasting and Audio-visual Programme	6,000
15	Physical Education and Extra Curricular activities	26,000
16	Archaeology	108,000
17	Special Education Council	90,000
18	National Sports Council	250,000
19	Higher Education :	
	a. Tribhuvan University	5,000,000
	b Mahendra Sanskrit University	162,500
20	Others:	
	a. Science Education	25,000
	b. Miscellaneous Educational Projects	10,000
	c. Budhanilkanth School	37,000
	d Nutrition Education	9,000
	e Grants to Higher Education Institutions	50,000
		Total : Rs. 17,290,000

S.No.	Name of the Project	Total Budget
	Other Social Programmes	

1	Royal Nepal Academy	15,000
2	Cultural Corporation	35,000
3	Pashupati Area Development	40,000
4	Lumbine Development	40,000
5	Royal Nepal Academy for Science and Technology	2,26,250
6	King Tribhuvan Memorial	2,500
7	Nepal Scouts	13,250
8	Sanothimi Technical School (UCEP)	2,000

Total Rs. 3,84,000

Health and Family Planning

Introduction

Health service is a need of the family and healthy manpower is a pre-condition for development, It is Necessary to make service- oriented institutional development of the Health sector in order to produce healthy manpower by extending primary health services to the doorsteps of the common people. As a result of the efforts made in every periodic plan for the development of the health sector, the diseases like malaria, tuberculosis, leprosy and other vaccine preventable diseases have been controlled to a large extent. Similarly, in respect of the institutional development, health posts have been established upto the Ilaka (Area) level and arrangements have been made for the services of the female community health volunteers at the ward level. A policy has been adopted to provide preventive and primitive services at the doorsteps of the common people through the Integrated primary Health Services. In spite of the efforts in the past, it has not been possible to reach the health level of the targeted people has not gone up either. It is a well- known fact that the rural people no not have access even to the general health facilities.

In keeping with national and international commitments, the present government is committed to make health services accessible to all by 2000 A.D. For the fulfillment of these commitments, the National Health Policy 1991 has been formulated with the objective of providing effective health services at the local level

Progress of the Seventh Plan

In the Seventh plan period, various programmes were implemented in the health sector with the objective of producing healthy manpower, providing basic health services, increasing the average life expectancy, controlling the population, extending mother and child health services, and improving upon the malnutrition situation. The progress achieved during the seventh plan is as follows:

1. Basic Primary Health Service

For Providing minimum health facilities to the rural population, 675 health posts have been converted into Ilaka level Health posts, with the objective of providing integrated primary health services on district wise basis. There was a target to establish 1,300 to 1,400 sub- health posts at the village Development committees but it could not be achieved due to the lack of people's participation. For the purpose of taking general health services to the doorsteps of the common people 24,000 female community health volunteers have been engaged at the ward level. To make the health services more effective institutional arrangements have been made by establishing district public Health offices in all the 75 districts and a Regional Directorate in each of the 5 Development Regions.

In the Seventh plan period, 13,24 and 8 (altogether 45) health post buildings were constructed respectively under the Rasuwa- Nuwakot, Sagarmatha and Koshi Hill projects.

In consonance with the policy of providing integrated primary health services, the services rendered by Uni-purpose projects have been conducted through the Ilaka-level health posts. The services provided accordingly in the Seventh plan period were as follows.

With the objective of minimizing the adverse effects of populations growth on the economic and social development of the country, permanent and temporary family planning services were provided to 223,832 and 1,452,588 couples (altogether 1,676,420 couples) respectively.

On the malaria eradication front, in each area of land inhabited by a population of 1,200,000 insecticides have been sprayed and 152, 517 malaria patients, identified as such through a collection of blood samples, have been provided treatment. This has helped to prevent the disease of malaria from becoming endemic.

The Expanded programme for immunization has been conducted in each of the 75 districts. Under the project. D.P.T. Polio and B.C.G inoculation services have been provided to 1,931,546, 1,883,289 and 157,858 children respectively. Tetanus toxoid injection has been given 8,844,682 times to girls and women of 14 to 49 years of age.

On the tuberculosis prevention side preventive programmes have been launched in 50 districts in the Seventh plan period and cough samples from 207,797 suspects have been examined. on the leprosy control side, the multi-drug therapy services have been provided in 57 districts.

In the nutrition sector, programmes have been implemented through hospitals, M.C.H clinics and health posts with the objective of boosting the nutrition status of pregnant and breast-feeding mothers and children. Under these programmes, nutrition conditions of 1,002,803 children have been taken care of, 39,137 children have been administered homicidal therapy, and 17,586 women have been treated for anaemic problems. Moreover, multi-vitamin tablets and capsules, R.D.Sol, Kitchen garden seeds and educational materials have been distributed and health workers have been trained.

2. Curative Service programmes

In the Seventh plan, a policy was adopted to provide curative services on the basis of referral system at the central, regional, zonal and district hospitals, but the policy did not materialize. No substantial progress has been achieved in developing Bir Hospital- by adding 200 more beds and by equipping it with specialist services into a central hospital. Nor was there any progress noticed in the expansion of physical and other facilities for Infectious Diseases Hospital (at Teku), Kanti Children's Hospital, Indra Rajya Laxmi Maternity Hospital and Bhaktapur Hospital. These hospitals were able to conduct only their regular services.

The Seventh plan aimed at initiating on a phased basis the extension of regional hospitals in all the Development Regions except the Middle Development Region. Preliminary work was, therefore, started under the plan for developing pokhara and Ghopa, Dharan hospitals into regional hospitals and making provisions for physical facilities at Dipayal and Surkhet Hospitals.

for raising the numbers of hospital beds and expanding facilities in the zonal hospitals in Biratnagar, Rajbiraj, Birgunj, Kanchanpur and Dang, construction of hospital and residential buildings are being carried on.

In compliance with the policy of providing each district with a 15 bed hospital service, 15 districts have been provided, in the Seventh plan period, with district level hospitals. In Khotang and Rasuwa the construction of hospital buildings is nearing completion; in Dhading, Rkolpa and Mugu the construction is underway; and in Ramechhap, Humla, Kalikot and Dolpa the construction is in its preliminary phase.

The Seventh plan aimed at raising the number of additional hospital beds over the kingdom to 985 by establishing new hospitals and providing more beds to the hospitals already existing hospitals. Nevertheless, the number of additional beds has reaching 1,245 as against the target of 985, the total number of hospital beds has gone up from 3,472 to 4,717. In line with the policy of rendering the medical system more effective through the referral system, a Medical division has been created under the Ministry of Health during the Seventh plan period.

As regards health labs. 23 districts have been provided with district-level labs and 59 health posts have been equipped with primary-level lab services. At the same time, in the Central Health Laboratory Bio-Chemistry, Immunology and Virology have, as per the target, been opened under the Nursing Services Improvement programme, the work of keeping the personal records of nurses at the regional level has been initiated and 4383 traditional birth attendants have been trained at the local level.

3. The Ayurvedic Hospitals

In the Seventh Plan period, 27 Ayurvedic hospitals have been established. By this the number of Ayurvedic hospitals has gone up to 155. Thirty-six Ayurvedic hospital buildings have been constructed, and 75 hospitals have been housed in their own buildings. In Dang, a hospital building is under construction. However, Singh Durbar Vaidyakhana has not been known to have made any notable progress.

4. Health Promotive Services

Under the Goitre and Cretinism Eradication Project, sales and distribution of 45,340 Quintals of iodized salt, installation of iodization plants in 3 places, and construction of warehouses in 4 places have been completed, and 4302732 persons have been given iodine injection.

Under the Blindness Prevention Programme, in the Seventh Plan period works relating to the control of zepthalmia caused by Vitamin A deficiency, the strengthening of ophthalmological departments of zonal hospitals, initiation of ophthalmology services in district hospitals, and the establishment of eye banks have been completed. At the same time, training camps and ocular health education programme have been conducted.

In the Seventh Plan period, provisions were made for antirabies vaccines in hospitals and toxic drugs were distributed for the control of stray dogs. In addition to the completion of the studies related to Japanese

encephalitis and kalazar, for controlling the diseases transmitted from animals and birds to man, anti-snake venom was provided to hospitals as required.

In the field of environmental health, works such as training health workers in food preservation technology in 21 districts, helping the construction of toilets in health posts, and building sewerage drains in and around the infectious Diseases Hospital have been completed.

Under the epidemiological Disease Information, Diagnosis and Control Programme in the Seventh Plan period, works like coding the statistical data obtained from health organizations according to the international system of disease taxonomy, publication of epidemiological bulletins, dispatch of medicines and teams of doctors to prevent the spread of epidemic diseases to district hospitals and public health branches have all been carried out.

Under the programme of the Rehabilitation of the physically disabled programmes such as providing medical treatment, plantation of artificial limbs, vocational Trainings and Skills in the production of low- cost Materials to 5000 Physically handicapped people have been conducted through the NGO sector in 6 districts.

Under the drug management programme, works such as the enforcement of the Drug Manufacture and Distribution Code, formulation of the National Drug policy, and scrutinizing the medicines produced by 700 pharmaceutical companies and issuing licenses permitting their import have been completed. Besides, Works pertaining to the establishment of regional medical stores for a regular supply of medicines to health organizations and related to regular supplies of medicines and medical instruments and tools have been done.

Progress during the Fiscal Years 1990- 91 and 1991-92

In the fiscal Years 1990-91 and 1991-92 that is to say, over the last 2 year various programmes related to basic health services, curative services, and health- promotive services were conducted. The progress achieved in these programmes is as follows.

Under the primary health services, integrated health services have been provided through Ilaka-level health posts. Accordingly, under the family planning and mother and child health services, the number of couples using the family planning devices has been raised to 854,225 (estimated) and the numbers of pregnant and breast feeding mothers and of infants and children availing health service facilities have stood at 918, 251 and 584,137 respectively, On the malaria eradication front, the malaria- affected area inhabited by a population of 720,000 has been sprayed with insecticides and upon the collection of blood samples, persons identified as malaria-afflicted have been given necessary treatment. Under the Expanded programme for Immunization, it is estimated that 1,135,013 infants and children will be provided D.P.T. polio, B.C.G and measles vaccines and 1,158,004 girls and women of 15 to 44 years of age with tetanus toxoid injection. on the tuberculosis control side 5,532 tuberculines will be treated and on the leprosy control side, 1413 lepers will be provided multi-drug therapy services. Moreover, with the objective of reducing infant mortality rate, diarrhoeal and respiratory diseases control programmes as well as nutrition programmes are under implementation.

In accordance with the health policy 1991, which aims at providing hospital- bed facility to primary health services and health institutions to village Development committees, 20 primary health centers and 200 sub health posts have been established in various village development committees. Besides, arrangements have been made for additional female community health volunteers.

In respect of curative services, additional physical facilities have been made available in Bir Hospital, Kanti Children's Hospital and Indra Rajya Laxmi Maternity Hospital and they have also been furnished with necessary equipment and instruments. besides, buildings and family quarters for 2 regional hospitals and 6 zonal hospitals are under construction. In keeping with the policy of running a 15 bed hospital in each district, the construction of hospital buildings is underway in 10 districts.

In addition to providing Medicines and equipments to hospitals and other health organizations, health lab services, health education, nutrition and other activities have been conducted. Regarding the ayurvedic services, works for the development of Naradevi Hospital and Singh Durbar Vaidyakhana have been initiated and the hospital in Dang has already started providing services.

Table 1

S.N.	Important Health	At the end of	Present status
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	Indicators	the Sixth Plan	(1991-92)
1	Infant mortality rate	111 per thousand	120 per thousand
2	Under 5 Mortality		165 per thousand
3	maternal mortality		850 per one hundred thousand births
4	Average Life Expectancy	51.48 Years	54 years
5	Population growth rate	2.5 percent	2.1 percent (according to the preliminary results 1991)
6	Crude death rate	16.57 per thousand	14 per thousand

Situation of Health Services

1	Hospitals	80	111
2	Hospital beds	3522	4768
3	Population-bed ratio	4631	3967
4	Health centers	26	18
5	Health posts	794	816
6	Population health post-ratio	20677	24000
7	Ayurvedic hospitals	125	155
8	Doctors	602	1182
9	Population-doctor Ratio	27271	15800
10	Middle-level and other	3919	6557
11	Village health workers	2132	4015
12	Women health volunteers	5000	24000

Existing Problems

The problems encountered in the implementation of various programmes and projects designed for the seventh plan are similar to those annually experienced in the implementation of the previous plans of these, of course, the problems that arose from the dearth of manpower and physical facilities in the health organizations and those concerned with administrative and financial management appear to be the major ones. They are as follows.

1. Owing to the topographical difficulties and the pressure exerted by the growth in the number of patients, the health sector has not been able to make primary health services available to the targeted populations. In the Himalayan and hill regions the walking distance itself has been a problem in the Terai belt, because of the pressure of the increased number of patients it has been difficult to provide even minimum health services.
2. The existing administrative and financial rules and regulations cause delay in decision-making and have hampered the proper mobilization of manpower due to the problems involved in the recruitment, transfer and promotion of the employees. This situation has impeded the supply of high-level and the supply of high level and medium level manpower to health institutions. Moreover, the lack of general

and refresher trainings for the manpower working at different levels is found to have remained no less serious.

3. There is a shortage of buildings and quarters in hospitals and other health organizations.
4. Inadequacy of budget allocation, delay in the release of the budget and non-utilization of the released budget soused by administrative and technical constraints appear to be the major problems in the development of health services.
5. On account of the shortage of medicines and instruments, health organizations have not been able to provide appropriate health services. Repair and maintenance of instruments and equipment, on the other hand, have also remained a serious problem.
6. Slackness in the procurement of land and contract assignment, delayed contract work, etc, have hindered the construction and repair of health buildings mentioned in the Seventh plan. This has led to an adverse impact of the services rendered by health organizations.

Background of he Eighth Plan:

Although the efforts made through the previous plans for the development of health services have, in some measure, helped to improve the health of the common people, the health level of Nepal, has, as shown by the health indicators, remained much lower than that of any other developing country. It has, therefore, been pointed out that further efforts should be made in the coming plans for boosting the general health level of the Nepalese people in consonance with the target of health for all by 2000 A.D. Besides, as per the commitment made by Nepal in the SAARC Summit for Children 1989 and the World Summit for Children. 1990, health services for children have to be toned up, too. The objective, policy and programmes of the Eighth Plan are as follows.

	Health Indicators	Present Status	By the End of the Eighth Plan
1.	Infant mortality rate (per thousand live births)	102	80
2.	Average life expectancy (years)	54	61
3.	Total fertility rate (per woman)	5.8	4.5
4.	Maternal mortality rate (per one hundred thousand births)	850	750
5.	Under 5 mortality rate (per thousand live births)	165	130

Objective

1. To produce healthy manpower necessary for development by improving the general health status of the people;
2. To raise the health status of the rural people by reaching basic primary health and medical services done to the village level;
3. To control population by making mother and child health and family planning services effective as per the people's aspirations at the local level;
4. To make quality health services available within the country by developing specialist-specific services.

Policy

1. In order to make health services available on a phased basis to each Village Development Committee, the services of women health volunteers, sub-health posts, health posts and primary health centres will be provided at wards, village development committees and electoral constituencies respectively. Preventive and promotive service will be provided in an integrated manner through these media.

2. Integrated primary health service will be provided through the primary health centres. Besides, hospital bed service will be made available, in primary health centres, for maternity and emergency treatments.
3. Sub-health posts will be established in Village Development Committees only on the basis of people's participation.
4. Curative services will be developed on the basis of referral system. To support the referral system a coordination net-work covering primary health centres and district, zonal and national hospitals will be established.
5. The central hospitals will be developed as specialist hospitals.
6. To make specialist and general curative services available within the kingdom itself, the private sector also will be mobilized. For this, a policy of providing facilities will be adopted.
7. Family Planning and Maternal Child Health services will be implemented under integrated primary health services. In providing the family planning services it will be seen that means of temporary and permanent family planning are provided as per the preference of the clientele. However, priority will be given to the concept of birth spacing. And, services related to the temporary means will be expanded accordingly.
8. In order to minimize the effects of malnutrition on women and children, the nutrition programme will be extended. Programmes for the treatment of micro-nutrient deficiencies, anemia, Vitamin A deficiency and iodine deficiency will be implemented.
9. Emphasis will be placed on strengthening the management capability of health organizations, village-level to central, and their functional capabilities will be enhanced.
10. Stress will be laid on the phasewise development and strengthening of the Ayurvedic system. Emphasis will be given to the consolidation of the existing organizations and the manufacture of medicines, manpower development, research, and so on.
11. Development of traditional medical systems such as Yunani, homoeopathy and naturopathy will be encouraged as much as possible.
12. To regularize and standardize the supply of medicines, policies and legal provisions governing medicines will be revised and importers and retailers of medicines will be given professional trainings. To motivate the manufacture of essential medicines within the country itself, participation by the private sector will be encouraged. In the government sector, however, the function of coordinating medical research and manufacture will be assigned to one single institution.
13. People engaged in traditional forms of treatment will be used in the dissemination of information pertaining to health, nutrition and family planning. The NGO sector will be involved in this function.
14. In order to effectualize the administrative, management and supervisory aspects of health services, Regional health Directorate and District Public Health Offices will be provided with required manpower and decentralized authority.
15. Health institutions will be helped to become financially self-reliant as far as possible. In the adoption of this policy due consideration will be given to the principle of social justice as well.
16. In the programmes related to management and services of health institutions, local bodies will be involved and made accountable.
17. For the development of health services, a policy of promoting participation of national international NGOs, private enterprises and foreign investors will be adopted.
18. To produce in a planned way the additional manpower necessary for different health organizations and service-oriented programmes, the functional aspects of the institute of Medicine and other health training institutes will be expanded and their training capabilities will be enhanced.

19. For improvement in the health service system, studies and research centered on themes like institutional development, management of resources, methods of preventive and curative treatment etc. will be conducted. To ensure accountability, the concerned organization will be provided with necessary physical facilities and their fields of activity will be expanded.
20. For the promotion of the health of women and children, stress will be laid on relevant programmes and intersectoral coordination.
21. A wide information network will be set up, which will caution smokers, alcohol drinkers and drug users against the hazards of their addictions.
22. Programmes for the rehabilitation of the physically infirm and disabled will be developed and implemented.

Priorities

1. To extend primary health services down to the village level;
2. To improve the physical facility and management aspects for the expansion of services;
3. To emphasize the use of temporary methods of family planning; and
4. To promote the involvement of local bodies in the implementation of health services.

Targets and Programmes

1. Basic Primary Health Service

The basic primary health services include preliminary treatment of common diseases, immunization against infectious diseases, mother and child health services, family planning services, and management of essential drugs. They also include health education, knowledge of food and nutrition and the dissemination of information about clean drinking water, sanitation and environment. These programmes, which were earlier being implemented separately under various vertical projects, are now conducted by a single body as per the policy of providing preventive, promotive and curative treatments in an integrated manner from the service as well as cost effective point of view. Thus, by the end of the Seventh Plan period, integrated primary health services were provided throughout the kingdom at Ilaka-level health posts distributed over the districts. Under this, children, 0-1 year of age, are given vaccinations against 6 child killer diseases, and T.T. Vaccines are given to girls and women of 15 to 44 years of age. In addition to this, services such as collection of blood samples from malaria patients, treatments of tuberculosis and leprosy, family planning services, treatments of diarrhoeal, respiratory and malnutritional diseases and health education are provided.

In the Eighth Plan period, services of female community health volunteers, health posts, sub-health posts and primary health centres will, in line with the health Policy 1991, be provided for the development of primary health services at ward, Village Development Committee and electoral constituency levels.

1.1 Female Community Health Volunteers

The provision of female community women health volunteers has been made with the objective of providing simple primary health services and health education at the doorsteps of villagers. Started in the fiscal year 1988-89, this programme has been implemented in 58 districts by 1991-92 and now has 24,000 female community health volunteers engaged in it. In the Eighth Plan period, 12,000 FCH volunteers will be trained for the remaining 17 districts, so that the services of these volunteers could eventually be available all over the kingdom. In this programme, women's participation will be mobilized to the maximum in order to achieve a reduction in the high fertility rate and infant mortality rate. For this, a Mothers' Group will be organized in each ward and female community health volunteers will be selected. In female community health volunteers will be selected. In the process of selection, village health workers are to be involved. The selected women will be given a training of 24 days in a year in turn and each trained woman will be provided with a kit-box to be used for simple treatment of common diseases. These women volunteers will visit home to home in the wards individually assigned to them and provide simple treatments that fall under primary health services. They will also disseminate

information about and impart education in the matters related to health. Moreover, these health volunteers will help enhance health awareness of the villagers and will also promote women's participation in the process of development.

1.2 Sub-health Posts, Health Posts and Primary Health Centres

Every Village Development Committee in the kingdom will be considered as the basic level for health services, and in the Eighth Plan period, 3,199 sub-health posts will be established in Village Development Committees through people's participation. Each sub-health post will be provided with 3 health workers consisting of one auxiliary health worker, one village health worker and one mother and child health worker. Through the sub-health posts, services pertaining to vaccination, treatment of diseases such as malaria, leprosy and tuberculosis; family planning, mother and child health; nutrition; and health and environmental education will be provided down to the ward level.

The health posts will provide services similar to those provided by the sub-health posts. In addition, they will supervise and evaluate the activities of the sub-health posts. Each health post will have the services of 6 health technicians: 1 health assistant, 2 auxiliary health workers, 2 assistant nurse and mid-wife and 1 village health worker.

In the Eighth Plan, integrated primary health services will be developed and consolidated. This will be done for the purpose of rendering health service easily accessible, less expensive and effective for the village people. The health posts that now exist in 205 electoral constituencies of the kingdom will be gradually upgraded so that each constituency can have one of its health posts converted into a primary health centre. For this, in the Eighth Plan period 100 primary health centres will be established as per the Health Services Policy, and this will lead to an increase of 300 beds. These health centres will, in addition to providing primary health services, provide bed facilities. Each primary health centre will have 3 beds, 2 of them for emergency service and 1 for maternity service and 1 doctor will be deputed to each centre.

To make the primary health and treatment services, to be provided at local, district and regional levels, effective, Regional Health Directorates and District Public Health programmes will be strengthened. In 50 districts, district health and medical services will be launched in an integrated manner. These institutes will formulate district health plans, and will implement and evaluate them. In order to render the district-level health administration effective, the management aspect of the administration will be improved.

The programmes to be implemented in consonance with the concept of integrated primary health services will be as follows.

1.3 Family Planning and Maternal Child Health

The main objective of the Family Planning and Maternal Child Health Programme is to control the growth of population in a planned way ameliorating the standard of living of the people by minimizing the possible adverse impact of the population growth on the economic and social development of the country. It also aims at protecting the health of pregnant and lactating mothers and of children below 5 years of age.

The Eighth Plan aims to bring down the fertility rate to 4.5 per 1000, in keeping with the long-term aim of decreasing the current rate of 5.8 to 4 per 1000 by 2000 A.D. For this, 1,246,800 couples will be provided family planning services during the Eighth Plan period. The current status of contraceptive prevalence rate of 23 percent will be raised to 32 percent.

Family planning services will be made available in hospitals, primary health centres, health posts and sub-health posts. The Depo-Provera programme will be extended from its present locus to the Village Development Committee and the Norplant and I.U.D. programmes from the hospital to the health post level. The condom and pills programme will be expanded through female community health volunteers. The laparoscopy service will be provided through regional and district hospitals. Services such as vasectomy and minilap will be provided through mobile camps organized for the purpose.

The Eighth Plan has the target of decreasing the current maternal mortality rate of 850 per 100,000 births down to 450 per 100,000 births by 2000 A.D. For the achievement of this purpose, the Plan has the

target of reducing the maternal mortality rate to 750 per 100,000 live births. For this, 1,704,000 pregnant and lactating mothers and 1,485,000 children below 5 years of age will be provided health services. In order to render mother and child health services effective, mother and child health clinics will be extended down to the ward level. Moreover, traditional birth attendants, auxiliary health workers, assistant nurse-midwives, and mother and child health workers will be given different types of trainings.

For the purpose of extending family planning down to the village level and for institutionalizing it at that level, construction programmes have been incorporated in the Eighth Plan. In the Eighth Plan period, primary health centres (100 in number), staff quarters (in 71 places), clinical training centres in 3 Development Regions (Middle, Eastern and Mid-Western), and 4 regional stores (1 each in Pathalaya, Dhangadhi, Butwal and Nepalgunj) will be constructed.

To make this programme effective, emphasis will be placed on factors such as training, participation by NGOs and also on aspects such as coordination and supervision.

1.4 Control of Malaria, Black Fever and Encephelitis

In Nepal, the Malaria Eradication programme has been in operation since 1958. Although malaria disease is found still uncontrolled or only partially controlled in 67 districts of the kingdom, the malaria eradication programme is presently being conducted in 40 districts only. In the Eighth Plan, the aim is to spray insecticides twice annually in each malaria prone area inhabited by a population of 600,000 to 800,000, collect and test 350,750 blood samples, treat persons identified as malarial cases, conduct reserach programmes, and get people to participate in the control of malaria.

On the kalazar and encephalitis fronts, the Eighth Plan aims as spraying insecticides, conducting entomological surveys and providing treatment to people suffering from these diseases.

1.5 Expanded programme on Immunization

The Expanded Programme on Immunization was launched as a unit providing various forms of immunization vaccine services after Nepal was declared smallpox-free in 1975. Under the programme, children of 0-1 year of age, are given D.P.T., polio, measles and BCG vaccines, and girls and women of 15-44 years of age are provided the tetanus toxide injection. Implemented only in 35 districts in the Sixth Plan, this programme was implemented in all districts of the Kingdom within the Seventh Plan period.

By the end of the fiscal year 1991-92 BCG vaccine has been provided to 83 percent, DPT 3 and polio 3 to 74 percent and antimeasles vaccine to 64 percent of children. Tetanus toxide was administered to 16 percent of girls and women of 15 to 49 years of age.

In the Eighth Plan period, this programme will be strengthened on an institutional basis. The vaccination services will be increased by 2 percent in the first 3 years of the Plan and by 1 percent in each of the remaining 2 years so that by the end of the Plan period 92 percent of the targeted population will benefit from them. By the fiscal year 1994-95 infant- tetanus will be completely eradicated. Death of children by measles will be reduced by 90 percent. Besides all these, measures will be taken to prepare an infrastructure necessary for the eradication of polio by 2000 A.D.

To achieve the stated objective the immunization services will be extended through a micro-planning to the hospitals, health posts and upto the ward level. In the Eighth Plan, the aim is to provide DPT, polio, BCG and measles antidotes to 3,139,232 children and tetanus toxide injections to 4,031,731 women and pregnant mothers. In the execution of this programme surveillance and cold chain systems will be used, and in addition to imparting continuity to surveillance, the evaluation system will be made effective from the health post level to the district and central level.

1.6 Tuberculosis Control

The Tuberculosis Preventive Programme had been implemented as a pilot programme in 1965. Until now, however, tuberculosis is considered as a major contagious disease, and 4 to 5 persons in a population of 1000 are estimated to come under its sway. For the control of this disease, a long-term programme has been formulated which aims at reducing its incidence rate to even less than 1 percent and its prevalence rate to 2 persons in a population of 1000.

Until now implemented in 55 districts, this programme will, in the Eighth Plan period, be extended to all the remaining 20 districts of the kingdom. For the Plan period, the target is to test the cough samples of 643,976 suspects and provide them treatment if the test results show positive, and treat chronic cases, resistant and relapse cases and cases of other types. Besides, to institutionalise the tuberculosis control programme, National Tuberculosis Centre at the central level will be strengthened.

1.7 Leprosy Control

The Leprosy Control Programme has been implemented as a pioneer programme in 1962. Currently being launched in 56 districts of the kingdom, this programme will be extended to 15 other districts so that the total number of the programme-districts will reach 71. The target is to reduce the leprosy prevalence rate to less than 1 person in a population of 1000. To achieve this target, 40,000 smear tests will be conducted and 1,550 lepers will be provided in-door services. For the Plan period, it is targeted to provide multi-drug therapy through health posts by training 1,500 health workers. The other target is to lay stress on health education and identify persons afflicted with leprosy and also to admit irregular and drop-out cases to regular treatment services.

1.8 Education, Information and Communication

This project has been launched with the objective of making the common people conscious about health by imparting health education through information dissemination, trainings and seminars. In the Eighth Plan period, health education will be imparted to teachers, health-related people and social workers through programmes like trainings and seminars. This will be done by adopting the policy of extending health education through an integrated approach. For this, works such as production and distribution of educational materials, strengthening of health education, organization of trainings, seminars and information dissemination strategies, and providing assistance to other institutions will be carried out.

With the objective of generating health awareness among the common people and bringing about positive behavioural change by familiarizing them with the small family concept, educational materials will be produced and distributed. Through these materials information will be disseminated about family planning, maternal and child health, immunization, diarrhoeal and respiratory problems, diseases such as malaria, leprosy and tuberculosis, physical infirmities, blindness, mental disorders, sexually transmitted diseases, AIDS, and malnutrition. The target is to produce 10.2 million copies of educational materials in different languages and distribute them during the plan period. It is also targeted to publish (1,440 times), display the materials (35,886 times) and provide health education training to health workers (1,150 in number).

1.9 Nutrition Programme

The Nutrition Programme has been continuing since the implementation of the Fifth Plan, with the objective of improving the nutritional status of pregnant and breastfeeding mothers. Surveys carried out from time to time have shown that in Nepal, children have suffered from various degrees of malnutrition and pregnant and post-delivery mothers from anaemia and iron deficiency. For improving this situation it is necessary to launch health and multi-sectoral nutrition programmes. To solve the nutritional problem it is essential to improve food production and distribution pattern and also to boost the purchasing power of the people and reform their habits of food consumption.

During the Eighth Plan period, the target is to reduce child malnutrition by half, provide antidotes against anaemias, and decrease iron deficiency- in compliance with nutritional target by the year 2000 A.D. For this, the Eighth Plan aims at treating the malnutritional problems of 2,720,964 children in proportion to their physical growths, anaemic problems of 1,260,569 pregnant women and breast-feeding mothers and Vitamin A deficiency problems of 52,714 children. This programme will be launched through sub-health posts, health posts, primary health centres and hospitals by involving Female Health Volunteers and Maternal Child Health Workers at the grass root level.

1.10 Diarrhoea Control

In Nepal, children below 5 years of age are subject to diarrhoeal problems. In a survey carried out in 1985 it is pointed out that every year 45,000 children fall victims to diarrhoea. As an effort for controlling this disease, this programme has been continuing since the second year (1985-86) of the Seventh Plan. The Eighth Plan aims at reducing the under-5 mortality by diarrhoea by 32 percent and

decreasing the number of diarrhoeal cases by 20 percent. For this, the use of R./D. Sol will be increased from the 60 percent (as it is now) in the correct way will be raised from the current 2.25 percent to 25 percent in the current plan period, 7,500,000 packets of R.D. Sol will be purchased for distribution, rehydration therapy centres will be established in 200 health posts, 15,000 primary school teachers and 60,000 scouts will be trained in rehydration therapy technology, and 4,000 health workers will be given basic and refresher trainings. In the Plan period, information about and free distribution of R.D.Sol will reach door to door through village health workers. At the same time, programmes on the control of epidemics- for instance, the control of the epidemic of cholera- will be launched.

1.11 Respiratory Disease Control

In the kingdom, 2,300,000 children under 5 are afflicted with this disease, and it is estimated that 45,000 of those children will die of it. This programme was started in the fiscal year 1987-88 with the objective of reducing children's morbidity and death, both of which result from the acquisition of this disease. Currently operating in 50 districts, this programme will, under the Eighth Plan, be extended to 20 other districts. In the Eighth Plan period, 778,000 respiratory patients will be provided treatment and medicines, 3,881 health technicians will be trained, and 400 traditional healers, and political and social workers of 70 districts will be given necessary orientation.

2. Curative Service

To upgrade the quality of health services, it is imperative that preventive as well as curative medical services be upgraded. By the end of the Seventh Plan period, the number of hospitals had risen to 111 and the number of hospital beds to 4,717. According to the population estimate for 1989, this increase provides 1 hospital bed to every 3,967 persons.

For the development of medical services, the referral system will be consolidated in the Eighth Plan. The hospitals have been classified as national, regional, zonal and district hospitals. District hospitals will be provided with 15 to 25 beds each, zonal hospitals with 50 to 150 each, and regional hospitals with 50 to 250 each. Central hospitals will be provided with 100 to 300 beds as well as with specialist services.

2.1 Bir Hospital

Additional 300 beds will be added in the Bir Hospital to develop it as the national central level hospital. In addition to the present available special units other new special units will be established and management will be made to assign respective specialists in the special jobs.

2.2 Kanti Children's Hospital

The only children's hospital in the kingdom, Kanti Hospital will be developed into a national referral hospital. For this, 150 more beds will be added, additional physical facilities and equipment and instruments will be provided. It will be developed into a hospital of international standard making necessary training arrangements for its medical personnel. However, curative services for children will be provided in regional and zonal hospitals as well.

2.3 Infectious Diseases Hospital

The Infectious Diseases Hospital will be developed into an Infectious Diseases Service Centre with an addition of 100 beds. For this it will be furnished with necessary manpower, physical facilities and equipment.

2.4 Indra Rajya Laxmi maternity Hospital

The Eighth Plan aims at developing Indra Rajya Laxmi Maternity Hospital into a centre providing specialist services in the areas of maternity and gynecology by an addition of 250 beds. This hospital will be developed so as to make it capable of providing child health and family planning services.

2.5 Other Hospitals

The mental Hospital will be provided with 50 more beds. Naradevi Ayurvedic Hospital will be provided with 100 more beds and the Homoeopathy Hospital with 10 more. There is also a programme for establishing an AIDS hospital of 10 beds in Kathmandu.

As per the policy of establishing a regional hospital in each of the Development Regions except in Central Development Region, Seti Hospital will, in the Eighth Plan period, be converted into a regional hospital for the Far Western Development Region, and for this, hospital and residential buildings will be constructed. Likewise, the Surkhet hospital will be developed into the regional hospital for the Mid-Western Development Region.

In the process of increasing the number of beds and physical facilities in the zonal hospitals, Sagarmatha Zonal Hospital will be provided with 8 family quarters, Janakpur Zonal Hospital with 25 more beds, Bharatpur Hospital with a new building with the capacity of holding 100 beds, Baglung Hospital with 10 additional beds, Jumla Hospital with 10 additional beds. Similarly, essential physical facilities will be arranged for the establishment of a hospital in Rapti Zone.

In keeping with the policy of providing every district with the service of a minimum of 15 bed hospital in the Kingdom, the hospital buildings currently under construction in the ten districts will be completed, and, on their completion, services will be started.

There will be a policy of continuing the construction of residential buildings in district, zonal and regional hospital premises. The construction of buildings for health posts will be continued, too.

The Eighth Plan aims at raising the number of additional beds to 1,165. This figure encompasses all additional beds - those to be provided to the hospitals that already exist and those to be provided to the hospitals that are scheduled to come. More additional beds will be made available through the establishment of B.P. Koirala Institute of Health Science in Dharan, B.P. Cancer Hospital, and hospitals and nursing homes to be run by private and NGO sectors. In the Eighth Plan period, a package programme will be launched for equipping hospital with manpower, medicines and equipment, commensurate with their levels.

To make the health organizations economically self-reliant as much as possible, hospital development committees will be instituted. The committees will be motivated towards adopting various measures of resource mobilization with people's participation in management.

3. Ayurved and Other Traditional Systems

The Ayurvedic service as such forms an integral part of health services. In line with the policy of developing Ayurvedic services in a phased manner, district-level Ayurvedic hospitals will be established, 100 beds will be added in Naradevi Hospital, and the construction of buildings for the Ayurvedic hospital in Dang will be completed. The physical facilities of the Ayurvedic hospitals will be expanded and their management capabilities toned up. Singh Durbar Vaidyakhana will be provided with more physical facilities and with equipment so that it could enhance quality in the manufacture of medicines. Further attention will be paid to the establishment of regional rural pharmacies and training centres.

4. Goitre and Cretinism Control

The programme of distributing iodized salt for the prevention of goitre, which results from iodine deficiency, has been in operation since the fiscal year 1972-73. To control goitre and help the physical as well as mental development of the people, 57,500 quintals of iodized salt will be distributed in the Himalayan and northern mountain belts of the country, where this disease is widespread. For the storage of iodized salt in different places in the kingdom, 11 warehouses will be constructed. In the Eighth Plan period, 500,000 metric tons of iodized salt will be distributed under the iodization management programme.

In addition to the implementation of the programme for the distribution of iodized salt for the prevention of goitre which is caused by iodine deficiency, the programme of giving iodine injection to children in order to save them from dumbness and speech defects and from mental infirmities has been in operation since 1979. The main objective of this programme is to eradicate goitre and speech defects- both resulting from iodine deficiency- by giving iodine injection to most of the people of the northern belt of the kingdom. The aim is to reduce goitre incidence from 42 percent to 35 percent and to provide iodine injection to a population of 5,335,000 in 41 districts for immunizing the children born in these districts from goitre. Besides, in 2 districts studies on the effect of the iodine injection will be conducted.

5. Environmental Health Programme

This programme has been going on since the beginning of the Seventh Plan. The objective of the programme is to keep drinking water hygienically clean, construct latrines, control insects and rodents, ensure preservation of foodstuffs, and prevent pollution of air by vehicular traffic fumes in urban areas and by smoke rising from household fires in rural areas. For the promotion of environmental health, booklets and pamphlets will be produced in collaboration with the Health Education Section and distributed through health posts, health centres, hospitals and training centres. Moreover, surveys of the impacts of environment on health will be conducted.

6. Drug Management

The major objective of the programme related to drug management is to provide qualitatively effective medicines, help maintain the quality of medicines, ensure supplies of medicines of superior quality only and to stop the marketing of spurious and toxic medicines.

In the Eighth Plan period, a drug testing lab will be established, which will test medicines and ensure the quality of the medicines sold in the medical market. Drug Acts and laws will be effectively enforced. Sales of drugs uncertified or imported in defiance of the Certificate Scheme will be gradually controlled. Trainings in basic knowledge of medicines will be provided to 2000 persons engaged in the sales of medicines. Inspection will be made of 182 drug industries and 1,450 medicines will be sample-tested. In order to encourage drug industries, facilitating legal provisions will be made in custom & income tax to provide incentives on raw materials, equipment, instruments and tools. Appropriate measures will be taken to produce manpower essential for the Drug Testing Lab.

To make drugs and equipment regularly available to all increasing health institutions, District Medical stores will be established in 10 districts. Medical stores established at the regional level will be developed and expanded. Works relating to the construction of physical infrastructures necessary for the medical stores will be completed.

7. Sexually Transmitted Diseases and Aids

This programme was launched in the fiscal year 1988-89 to control, on time, social and economic hazards emerging from the increase in the number of people suffering from sexually transmitted diseases and AIDS. The principal objective of the programme is to look after cases of sexually transmitted disease, train health workers engaged in the treatment of such cases, and educate the different sections of the society about the process of identifying cases of sexually transmitted diseases, the importance of diagnosing and treating these diseases, the natural ways of escaping from them, and so on. Under the Eighth Plan, training in lab techniques will be provided to 300 persons. Blood samples related to AIDS will be collected from 25,000 persons and surveys will be conducted by using the samples. The Eighth Plan aims at establishing labs for experimentations on matters connected with AIDS and sexually transmitted diseases in 20 districts. It also aims at constructing a building for a 10-bed AIDS control hospital and 2 hostel buildings. Information regarding AIDS will be widely disseminated by including AIDS in health education programmes, and in the information dissemination, cooperation will be sought from S.T.D. clinics, drug abuse rehabilitation centres, social workers, political figures, teachers, family planning institutes, NGOs and journalists.

8. Epidemiological Programme

Under the Epidemiology Programme, zoonotic, rabies and other infectious diseases are being diagnosed and controlled. In the Eighth Plan period, research works relating to the prevention and control of infectious diseases will be conducted. The findings of the research works will help to save people from untimely death caused by such diseases. Indicators of epidemic disease will be developed. Sentinel surveillances programmes will be extended to all hospitals in the kingdom. Necessary steps will be taken to stop infectious diseases from developing into epidemics. Studies focused on non-infectious diseases such as heart disease and cancer will be completed. Research on the identification of the species of insects that bear bacteria of infectious diseases, other than malaria, phylaria, encephalitis, black fever and plague, and on their general habits and behaviours will be conducted. The conclusions of the research will help to control the insects. In the Eighth Plan period, for the control of rabies, vaccines will be provided through the cold chain system to the districts and the injection services will thus be extended to the district level. In the treatment of rabies, the use of indigenous vaccines will be encouraged. Studies themed on encephalitis, brucellosis and echinococcosis which are conveyed respectively from animals

and birds, milk and meat to man will be conducted. A study will also be carried out on the disease of plague. Information about infectious diseases will be disseminated in coordination with the health education sector.

9. Health Laboratories

The health lab services have been mobilized in order to make effective diagnosis of diseases and to examine the activities of toxic and infectious bacteria in drinking water and foodstuffs. The Eighth Plan aims at providing district-level health lab services to 16 districts, zonal-level lab services to all zonal hospitals, regional-level lab services to all regional hospitals, and preliminary lab services to 50 health centres and health posts. The labs in the sub-health posts will examine malaria parasites, leprosy viruses and polio virus, and also conduct pathological testing of stool and urine and of tuberculosis. The health posts will be provided with microscopes and other accessories as well as with chemical drugs. The district-level labs will run hematological, biochemical and parasitological services. The zonal and regional labs, on the other hand, will provide hematology, bacteriology, biochemistry, histopathology and parasitological services. On top of these, lab services concerning diagnosis of contagious diseases and biopsy of cancer cases will be made available. Central health Lab at Teku will be developed into the National Lab providing specialist services. Under the Eighth Plan, this will be furnished with ultra-modern machinery. The construction of lab buildings in 10 districts, a regional lab building in Surkhet and a training building in Kathmandu will be completed. In the plan period, 300 persons will be given pilot training in order to produce necessary manpower for running the health labs at district-level and health posts. Moreover, 10 health labs will be strengthened.

10. Nursing Improvement Programme

Under the programme of strengthening the nursing sector, in-service trainings will be organized. The training courses will aim at developing the professional knowledge and skills of nurses and assistant nurse-midwives attached to hospitals and health centres. The trainings will help to enhance the quality of the nursing service.

11. Nepal health Research Council

Nepal Medical Research Committee, which had been conducting research essential for the development and expansion in the area of health, was converted into Nepal Health Research Council in the fiscal year 1990-91.

Under Nepal Health Research Council, scientific research projects on themes such as kala-azar, tuberculosis, leprosy, human reproduction, mother and child food habits and practices, hepatic diseases and non-contagious diseases of chronic type and age maturity will be conducted.

Mobile Teams¹²

Specialist services of a mobile team will be provided, once in a year, to an under-developed district in each Development Region. Through such teams E.N.T. operation and specialist dental services will be made available.

13. Development of Health Sector Manpower

The availability of manpower is an essential precondition for delivering primary health services to the local level in keeping with the long-term objective of health service in the Eighth Plan. For this, a manpower plan will be formulated to meet the basic, medium and high-level manpower needs of health organizations. Under this Plan, the required manpower will be trained and supplied to the respective organizations. As regards the basic and medium level manpower production, the training centres will provide pre-service and in-service trainings in an integrated form in accordance with the integrated Primary Health Service Policy. A policy will be adopted for the production of the high-level manpower within the country itself by mobilizing both the government and private sectors. As far as the specialist manpower is concerned, there will be a policy of sending trainees to foreign institutes of repute. Trainings for the basic and middle level manpower, essential for health institutions ranging down to the local level, will be organized and placed under various concerned programmes conducted at the health training centres. Under the pre-service programmes, village health workers, maternal child health workers, female community health volunteers auxiliary health workers will be trained. The refresher

training programme related to preventive and general health services will be provided, as required, to health workers, from the employees of District Public Health Sections to female community health volunteers.

In order to meet the needs of primary health centres and sub-health post to be established in the Eighth Plan period, 3,200 assistant health workers and another 3,200 child health workers will be trained. Professional competence of health technicians working at district and local levels will be upgraded through refresher trainings. In the same way, primary school teachers and health personnel working in governmental health organizations will be given training related to primary health services. All these trained people will be involved in raising the health awareness among the general masses.

For the development of nursing services, in-service trainings will be organised for nurses and assistant nurse-midwives. In order to reduce the maternal mortality rates in the villages, 6,000 midwives will be trained in mother and child health techniques. Similarly, the work like curriculum revision, publication of manuals and production of educational materials will be undertaken for the purpose of refining the health related training programmes.

The supply of high-level health manpower required for the development of curative services will be met through the Institute of Medicine and by employing people educated abroad through private funding. With a view to achieving self-reliance in the production of high-level manpower, B.P. Koirala Institute of health Science will be established in Dharan. This Institute is expected to produce 50 to 100 doctors. Suitable policies will also be adopted to encourage the establishment and operation of medical colleges in the private sector.

For manpower training and production, the existing five regional training centres and the training centre in Janakpur will be provided with more physical facilities including buildings. This will help to enhance the functional capabilities of these organizations and strengthen them. A central training centre will be established which will ensure the operational efficiency of all training centres. This centre will provide policy guidelines, revise the training curricula, coordinate training programmes, devise follow-up measures and develop supervision strategies.

14. Management

The management aspects of health organizations, from central down to district level, will be strengthened in line with the national policy of supplying technical manpower to health institutions. For this, the supervision mechanism covering manpower training and management will be made effective. Flow of medicines, equipment and other goods to the health organization will be regularized and managed properly.

To strengthen planning, follow-up, supervision, and evaluation aspects, statistical formats will be structured, which will help to develop an integrated information system. A health information bulletin will be published on a regular basis.

For the evaluation of programmes implemented in the health sector, monitoring and evaluation indicators will be developed and with the help of the indicators mid-term and full-term evaluations will be made.

15. Miscellaneous

Information about the hazards of addictions such as smoking, drinking alcoholic beverages and the use of drugs will be widely disseminated. For the rehabilitation of the physically infirm and disabled, programmes will be developed and implemented through the private sector as well as NGOs. Since the safety of blood and blood products has a very significant role to play in the control of AIDS, in the Eighth Plan period, the Blood Bank run under Nepal Red Cross will be as much assisted as possible.

Books, papers and journals essential for raising the standard of research in health will be provided through the National Health Information Service Centre. The centre will run library and communication services which will provide information related to preventive, curative and health promotive health services.

Implementation Arrangements

1. For effective execution of the programmes incorporated in the Eighth Plan, health organizations, down to the local level, will be made capable as well as accountable in line with the principle of decentralization. Besides, for a qualitative development of health services, the private sector also will be encouraged.
2. Basic primary health services will be provided in keeping with the concept of integrated health service. These services will be provided through female community health volunteers, sub-health posts, health posts and primary health centres. For this, the management aspects of Regional health Directorates, Public Health Office, hospitals and health centres will be toned up.

Details of Expenditure

A sum of Rs. 5,466 million has been allocated for the development of the health sector in the Eighth Plan period.

Budget Description

	Name of the Project	Rs. in '000
1.	Basic Primary Health Service	
1.1.	Female Community Health Volunteers	157,000
1.2.	Sub-health Posts, health Posts and Primary Health	430,864
1.3.	Family Planning and Maternal Child Health	2,008,349
1.4.	Malaria, Kalazar and Encephalitis Control	635,625
1.5.	Expanded Immunization	503,500
1.6.	Tuberculosis Control	80,384
1.7.	Control of Leprosy	85,305
1.8.	Health Education, Information and Communication Programmes	17,572
1.9.	Nutrition Programmes	68,188
1.10.	Control of Diarrhoea	80,000
1.11.	Respiratory Diseases	20,744
2.	Curative Services	
2.1.	Bir Hospital	156,535
2.2.	kanti Children's Hospital	100,000
2.3.	Infectious Diseases Hospital	25,000
2.4.	Indra Rajyalaxmi Maternity Hospital	80,700
2.5.	Other Hospitals	383,400
3.	Ayurved Development and other Traditional Treatment Systems	40,000
4.	Goitre and Cretinism Control	145,049
5.	Environmental Health Programmes	2,500
6.	Drug management	40,000
7.	Sexually Transmitted Diseases and AIDS	24,200
8.	Epidemiological Programmes	20,098
9.	Health Laboratory	30,000
10.	Nursing Improvement Programmes	20160
11.	Nepal Health Research Council	7,200
12.	Mobile Teams	10,000
13.	Development of Health Manpower	176,427
14.	Management	170,000
15.	Miscellaneous	98,200
	Grand Total	5,466,000

Drinking Water and Sanitation

Introduction

Drinking water including minimum sanitary facility constitutes one of the basic needs for the people. In spite of several programmes launched in the areas of drinking water and sanitation, under the previous- plans, a large segment of the country's population still remains deprived of these facilities. In mountain areas in particular, people have to waste time and energy walking fairly long distances for fetching drinking water.

This has, indirectly affected production. Besides, there has been no noticeable decrease in the communicable diseases acquired through the. use of water from sources continually prone to pollution. On the sanitation side, too, nothing substantial has yet been achieved.

In this context, drinking water facilities have to be expanded for the creation of a situation where the energy and time wasted by the households for. fetching water could be utilized for production-oriented activities and to raise the general health level of people living in rural areas, Similarly, it is also equally necessary to give attention to aspects such as personal hygiene, and households community and environmental sanitation.'

In view of rapidly growing urbanization and the pressure exerted 'by the growth of population in urban areas, it is deemed necessary to improve the water supply both quantitatively and qualitatively and densely populated urban areas have to be provided with better sewer age and waste disposal facilities.

Progress During the Seventh Plan

it is estimated that during the Seventh Plan period drinking water facility has -been provided to a total of 2,715, 000 people 2,447,000 in the rural areas and 268,000 in the urban areas. Likewise, on the sanitation side, an additional 32,000 people have been provided with latrine facilities through the construction of 4,000 latrines under the Low-cost Latrine Programme.

Progress During the Fiscal Years 1990-91 and 1991-92

In the fiscal year 1990-91, drinking water facility was provided to an additional 483,000 people - 454,000 in the rural areas and 29,000 in the urban areas. similarly, it is expected that in the fiscal year 1991-92, a total of 830,000 people - 821,000 in the rural areas and 9,000 people in the urban areas, would benefit from drinking water facility.

Thus, by the end of the fiscal year 1991-92, a total of 78,71,000 people (42 percent) 6,699,000 (39 percent) people in rural areas and 1,172,000 (67 percent) people in urban areas will be provided with drinking-water facility. In the same way a total of 1,112,000 (6 percent) people - 513,000 (3 percent) in villages and 599,000 (34 percent) people living in urban areas - will receive sanitation facilities.

Drinking Water and sanitation Position by the end of the Fiscal Year 1991-92

Population in 1000)

S.N.	Description	Rural	Urban	Total
	Drinking Water			
1.1	Beneficiary population by the end of the Sixth Plan	2,977	866	3,843
1.2	Additional beneficiary population by the end of the Seventh Plan	2,447	268	2,715
1.3	Additional beneficiary population in the fiscal year 1990-91	454	29	483
1.4	Additional beneficiary population in the fiscal year 1991-92 (estimate)	821	9	830
1.5	Beneficiary population by the end of the fiscal year 1991-92	6,699	1,172	7,87.1
1.6	Total population in the fiscal year 1991-92	17,102	1,761	18,863
1.7	Percentage of beneficiaries	39	67	42
2.	Sanitation			
2.1	Beneficiary Population by the end			

	of the fiscal year 1991-92	513	599	1,112
2.2	Percentage of beneficiaries	3	34	6

Existing Problems

The problems encountered so far in the implementation of drinking water and sanitation programmes are as follows:

1. In view of implementation capability, the government level programmes are ambitious and, therefore, there has been low physical achievement as compared to target.
2. Institutional arrangements to take the drinking water and sanitation programmes down to the village level are not properly identified.
3. The government agencies are engaged in projects that have greater per capita cost and long gestation period.
4. The projects are handed over to the Users' committees only after they are complete. This practice has toned down the users' enthusiasm and has ultimately made maintenance of the completed projects difficult.
5. District and Village-Level bodies are not involved in the selection, design, implementation and maintenance of the projects.
6. In rural areas drinking water and sanitation programmes are not conducted in an integrated manner.
7. The involvement of NGOs and the private sector is not adequate.
8. Adequate effort is not made for the development and extension of appropriate time-tuned technology in order to reduce per-capita cost.
9. In spite of spending the total budgeted money, the targeted physical progress is not achieved because the body implementing the plan is not directly accountable to the people.
10. Programme implementation is delayed giving rise to cost escalation due to lack of timely disbursement of budget.

Background of the Eighth Plan

Since it appears that most of the projects completed in the past stand in need of maintenance, it has not been possible to supply required quantity of drinking water to people already provided with drinking water facilities. Thus, it appears that a great amount of resources will have to be invested for the reconstruction of the existing projects. Similarly, it appears that the selection of projects that can be completed within a short period of time and at smaller investment has been overlooked and not much effort is made towards involving the users in construction works. There has been no notable effort at carrying out construction works with smaller investment by exploiting whatever source of water is available in the proximity. This seems to have been the case in drinking water arrangements in urban areas, particularly the Kathmandu Valley. The current leakage of 40 percent of drinking water has been another acute problem. In view of the scenario that the supply of drinking water may become a major problem the world over in coming years, special steps have to be taken to make consumers aware about the proper use of drinking water. Special attention has also to be paid to protect the tourism sector from being adversely affected by the lack of personal hygiene and environmental sanitation.

The target of providing drinking water facilities to the entire population of the kingdom in the next 10 years can be achieved only if drinking water and sanitary-facilities are widely expanded -with active participation of the beneficiaries in project planning, construction, maintenance and monitoring. Furthermore, achievement of this challenging target would require flexible policy, maximum mobilization of available resources, participation of private and government sectors, research on low cost technologies, etc.

Objective

During the Eighth Plan period, drinking water and sanitation programmes will be launched for achieving the following objectives:

1. To provide drinking water facility to 72 percent of the population, in consonance with the target of providing such facility to the entire population in the next 10 years.
2. To provide basic knowledge of sanitation and sanitary facilities to maximum number of people along with cleaning and conservation of environment.

Policy

In the implementation of drinking water and sanitation programmes, the following policies will be adopted:

1. A list of all projects, big and small, will be prepared, at district level through survey and construction will be carried out accordingly. However, in the selection of projects, water right will be adequately honored.
2. Drinking water facilities will be expanded in the rural areas of Terai by installing shallow tubewells, deep-set tubewells and construction of wells. Appropriate arrangements will be made for the maintenance and repair of wells and tubewells currently in use.
3. Rural drinking water and sanitation programmes will be implemented in an integrated manner.
4. In view of the fact that drinking water and sanitation programmes in the rural areas cannot be successfully implemented and maintained or repaired without the participation of women, women's participation will be sought in these programmes.
5. Priority will be given to projects which are small, require a lesser per capita cost, can attract people's participation, and can be implemented maintained and repaired at grassroot level, and to projects designed for remote and areas areas inhabited by backward communities or virtually deprived of drinking water and sanitation facilities.
6. The existing irrigation system will be improved and arrangements will be made for helping local people to use irrigation water for drinking purpose as well.
7. Drinking water and sanitation programmes will be conducted in consonance with the local settlement pattern and situation.
8. To implement the drinking water and sanitation programmes perseveringly, necessary revisions will be made in the guidelines prepared in 1990.
9. In all stages of drinking water project, i.e. identification, design, implementation and maintenance, involvement Users' Community will be made mandatory.
10. The Users' Committee will be involved in the detailed survey, design, cost estimate, etc. of projects in rural areas. A system of agreement between the implementing agency and the Users Committee will be made after discussions with latter regarding the cost to be borne and the labour to be contributed by the users, operating framework of projects and the amount to be deposited by them for programme implementation and maintenance/repair, etc. The implementing agency will deposit the fund provided by the government as well as the fund raised by the users in a near-by bank and the bank account will be operated on the joint signature of a person designated by the Users' Committee and a representative of the implementing agency. If the construction work of a project-has to be done through a contractor, approval of Users' Committee on the matter will be made mandatory. Arrangement will be made to maintain expenditure account transparent to both the Users' Committee and the implementing agency.
11. NGOs, local bodies and the private sector will be involved in the works connected with the installation of shallow and deep-set tubewells, construction of wells. and maintenance thereof in the rural areas of Tarai Similarly a policy of involving NGOs and private sector in construction works of drinking water projects benefiting to a maximum of five hundred persons in rural areas and conservation /protection of water sources will be adopted. Rural drinking water projects constructed at government level will be gradually handed over to the Users' Committee. In this regard a suitable policy framework will be worked out and implemented.
12. Arrangements will be made to involve the private sector and NGOs in the implementation of drinking water and sanitation programmes. It will be seen that their implementation processes are uniform.
13. Research on and development of low-cost and locally viable technologies will be carried out through both NGOs and NGOS. The technologies then developed will be widely distributed.
14. Drinking water projects can be constructed by companies set up under joint ownership of the private sector consumers and local bodies. For such activities bank loans and government grants will be made available.
15. Purchase of materials required for any rural drinking water project can be made only if jointly approved by the Users' Committee and the technician. Besides, the purchase will have to be made in proportion to the progress achieved in the project work or with the consent of the Users' Committee.
16. In rural areas, people's awareness towards health and sanitation will be raised through health education. For this, proper coordination will be maintained with the education and health sectors.

17. Under the sanitation programme, the concerned bodies/agencies will provide training in latrine construction and production of construction materials. In addition they will develop and disseminate low-cost technologies that suit the local geographical/ topographical conditions.
18. As government effort alone will not suffice to reduce leakage in water supply system, support of consumers will also be sought.
19. Sewer lines and used-water ducts will be constructed and extended in the major urban areas.
20. As it is not possible to carryout sanitary works in urban areas through a single body, training programmes aimed at making people aware of the importance of sanitation will be organized, which will eventually help to improve the local environment. Appropriate policy will be formulated for the executing agency to maintain close linkage with the municipalities and the social workers while implementing the programmes.
21. Arrangements will be made to prevent the ill effects of dumped filth and garbage on people's health. The private sector will be encouraged to convert the filth and garbage into compost fertilizer and also to generate energy from such materials.
22. Appropriate legal provisions respecting -environmental sanitation in urban areas will be enacted and enforced.
23. In order to improve the water supply system for meeting the needs of the growing urban population, priority will be given to the utilization of springs and water bodies available in the districts. Besides long-term measures will be explored to supply drinking water in urban areas. A similar policy will be followed in the case of Greater Kathmandu.
24. The volume of water supply will be increased by improving the existing supply system. By developing alternative uses of water supply situation will be improved during dry seasons.
25. In order to increase people's participation in the selection, implementation and operation of drinking water projects, District Development Committees and Municipalities will be involved. The technical assistance necessary for the initial phase of a project will be made available from the concerned agencies.

Projects to be Implemented by NGOs, Private Entrepreneurs, Firms, Companies and Users

NGOs, private entrepreneurs, business firms/companies and consumers play a vital role in the carrying out rural drinking water and sanitation programmes. The following arrangements will be made while implementing projects through these institutions.

1. The NGOs, private enterprises, and business firms/ companies registered at national or district level, and the Users' Committee will be encouraged to educate the people at the village level about drinking water and sanitation programmes.
2. Priority will be given to the involvement of NGOs, private enterprises, business firms/companies and the users for carrying out the rural drinking water and sanitation programmes according to demands of the villages or in the areas specified for the purpose by the District Development Committees.
3. While getting the program implemented through NGOs, private entrepreneurs, firms, companies and users, a fixed proportion of the total cost shall be made available to the implementing body as management expenses.
4. The drinking water and sanitation programmes to be implemented by INGOs will have to be consistent with the national programme and the INGOs will have to follow the policies adopted for the purpose.
5. To avoid overlap ping or duplication, of drinking water and sanitation programmes conducted by different INGOs, a system of coordination will be maintained by the Ministry in the same district of Housing and Physical Planning.

Basis of Cost-Sharing

In view of the high priority given to people's participation in the Eighth Plan, the following arrangements will be made for the users' contribution in the total project cost, other than *the* administrative cost in any project to be carried out in rural areas.

1. In piped drinking water projects the users will be required to bear 10 percent of the total cost in cash, kind or labour.
2. In the case of underground projects such as shallow tubewell well, the users will be required to bear 20 percent in minimum and in deep-set tubewell projects 10 percent in minimum of the total project cost-in either case, in cash, kind or labour.

3. In remote areas and in areas inhabited by backward communities, a minimum of 5 percent of the project cost will be borne by users in cash, kind or labour.
4. in the case of gravity and sprinkler irrigation, 90 percent of the total expenditure incurred for intake improvement and distribution system will be provided as government subsidy and the remaining 10 percent will have to be borne by the users. In such a project the irrigation users will be entitled to collect fee from those who use water for drinking purpose.
5. In the construction of low-cost latrines (except super- structures) 50 percent of the total cost will be provided by His Majesty's Government and the remaining 50 percent will have to be borne by the users themselves.

Arrangements for Supervision of Drinking Water Projects Constructed in the Rural Areas

The concerned agency will monitor whether or not the local people are receiving drinking water from the projects constructed in the village areas. In this context, it will be mandatory for the concerned agency to prepare a current status report every 6 months and submit it to the Ministry of Housing and Physical Planning. The objectives of the reporting are to facilitate gradual handing over of the rural projects to the Users' Committee and keep the Ministry informed of the actual drinking water situation in the village.

Publicity

In the Eighth Plan period, various communication media will be used in order to involve maximum number of people in the drinking water and sanitation programmes and get benefitted.

Programmes

In the formulation of the Eighth Plan, a target has been set to gradually provide drinking water facilities to the entire population within the next ten years.

Drinking water

In the Eighth Plan period, drinking water facilities will be provided to an additional 7,199,000 people (6,756,000 people in rural areas and 443,000 in urban areas). Thus, by the end of the Eighth Plan period, a total of 15,070,000 people (72 percent), -13,455,000 (72 percent) people in rural areas and 1,615,000 (77 percent) in urban areas, will have access to drinking water facilities.

Sanitation Programme

In the Eighth Plan period, an additional 1,573,000 people (1,159,000 in rural areas and 414,000 in urban areas) will benefit from sanitation facilities. Thus, by the end of the Eighth Plan period, sanitation facilities will be extended to a total of 2,685,000 (13 percent) people, which covers 1,672,000 (9 percent) people in rural areas and 1,013,000 (48 percent) people in urban areas.

The details of the drinking water and sanitation programmes is given in the following Table.

Drinking Water and sanitation Positions by the End of the Eighth Plan

(Population in 1000)

S.N.	Description	Rural	Urban	Total
	Drinking Water			
1.1	Population expected for 1991-92	17,102	1,761	18,863
1.2	Beneficiary population by the end of 1991-92	6,699	1,172	7,871
1.3	Percentage of beneficiaries	39	67	42
1.4	Population by the end of the Eighth Plan	18,801	2,088	20,889
1.5	Additional beneficiary population in the Eighth Plan period	6,756	443	7,199
1.6	Beneficiary population by the end of the Eighth Plan (1.2 + 1.5)	13,455	1,615	15,070
1.7	Percentage of beneficiaries by the end of the Eighth Plan	72	77	72
1.8	Percentage Growth over 1991-92 (1.7 - 1.3)	33	10	30
	Sanitation			

2.1	Population expected for 1991-92	17,102	1,761	18,863
2.2	Beneficiary population by the end of 1991-92	513	599	1,112
2.3	Percentage of beneficiaries	3	3	6
2.4	Population by the end of the Eighth Plan	18,801	2,088	20,889
2.5	Additional beneficiary population in the Eighth Plan period	1,159	414	1,573
2.6	Beneficiary population by the end of the Eighth Plan (2.2 + 2.5)	1,672	1,013	2,685
2.7	Percentage of beneficiaries	9	48	13
2.8	Percentage increase (2.7 - 2.3)	6	14	7

To achieve the target mentioned above the following programmes will be implemented.

Tubewell Programme

About 60,559 new shallow tubewells (including artisan wells) and deep-set tubewells will be installed and wells will be constructed in the rural areas of the Terai benefitting a total of 4,057,000 people.

Source Protection

In various parts of the country traditional springs and other sources are being used for drinking water. In this regard the Eighth Plan has a target of improving 8000 water sources, benefitting 2,68,000 people.

On-going Projects

An additional 1,404,000 people will be benefitted from the completion of about 500 on-going piped water supply projects.

Maintenance and Repair Programme

The supply of drinking water will be kept intact through the maintenance and repair of 5,000 tubewells and 2,000 wells installed and constructed in the previous years.

Maintenance, Repair and Hand-over

In line with the policy of gradually handing over the completed projects in rural areas to the user' Committees, about 240 piped drinking water projects will be repaired and handed over during the Eighth plan period.

Projects to be launched in the Eighth Plan and completed in the Ninth Plan.

As per the objective of providing drinking water facilities to the entire population within next 10 years, about 1100 projects will be launched in the current plan period. an additional population of 1,027,000.

Rehabilitation of Urban-Area Drinking Water Projects

In the Eighth Plan period, 28 urban drinking water projects will be rehabilitated and drinking water facility will be provided to an additional 360,000 people.

Water Supply for Greater Kathmandu

In greater Kathmandu (Kathmandu, Lalitpur and Bhaktapur) growth of population, construction of buildings and establishment of industries have all created a big problem in the supply of drinking water. It is estimated that by the end of the fiscal year 1991-92, some 5,70,000 persons out of 6,22,000 persons will be benefitted from the piped drinking water facilities.

In the Eighth Plan period, these facilities will be made available to an additional population of 83000, with an aim of covering a total of aboutn 6,53,000 persons by the end of plan period.

In addition to this, steps will be taken to increase the reliability of the drinking water supply in Greater Kathmandu. According to a recent estimate, a total of 91.10 M.L.D. (60.34 M.L.D. from surface sources and 30.76 M.L.D. from underground sources), of water is presently being obtained. It appears that by the end of the plan period Greater Kathmandu's actual requirement of 106.09 M.L.D. of water will fall short by 14.99 M.L.D. For meeting this shortage, studies related to alternative sources and means of water supply will be conducted and programmes implemented accordingly. If the 40 percent leakage that is currently taking place in Greater Kathmandu is checked, the supply situation will certainly improve by this will not be possible to achieve immediately. The Eighth Plan target is to cut the 40 percent leakage down to 30 percent so that an additional 9.11 M.L.D. of water is added to the present supply.

About 16.53 M.L.D. of water will be made available by the end of the Plan through the construction of new in-takes in the present sources. While supplying drinking water, if enough water can be obtained from surface water bodies, the use of this water will be maximized and the use of underground water will be minimized. This will help the recharge of underground water, which will yield an additional 10 M.L.D. of water during dry seasons.

Keeping in view drinking water situation of Greater Kathmandu the existing 23 deep-set tubewells will be reconstructed for maintaining balance in the supply of drinking water.

To improve the water supply in Greater Kathmandu, a target has been set to draw water from the Kodku, Roshi, Godavari, Manohara and Nakkhu rivers. Of the proposed projects Kodku, godavari, Monohara and Nakkhu will yield 40, 4, 6 and 5 M.L.D. of water respectively, thus providing additional 55 M.L.D. in total. The projects are scheduled to be completed within the Eighth Plan period. The Roshi project, which will begin in the Eighth Plan period, will yield 30 M.L.D. of drinking water. In addition to these industries located within Kathmandu Valley will be encouraged to relocate outside the valley. The relocation of industries will help reduce pollution inside the valley.

Sanitation Programme

Keeping in view the human nature of giving attention to personal cleanliness in retrospect with public sanitation, the Eighth Plan has set a target to construct 2000 latrines in school health post and drinking water project premises. It is expected that 20,000 people will benefit from this programme. As women can play a significantly effective role in stimulating the common people towards health education and sanitation, such programmes will, be conducted through female workers. Under this programme 50, DOD private latrines will be constructed, which will provide services to an additional population of 3,00,000.

In the urban areas outside Kathmandu Valley a population of 1,00,000 will be served by constructing sewer lines and used water ducts.

New and old sewer lines within the valley will be reconstructed and extended, benefitting 2,45,000 people with sanitation facilities.

In 9 urban areas outside the valley, about 9,000 low-cost latrines will be constructed. This will provide latrine facilities to 54,000 people.

Sanitary facilities will be provided to an additional 6,95,000 people through sanitation programmes carried out by national NGOs and INGOs. Besides, 15,000 latrines connected to bio-gas plants will be constructed through the private sector from which an additional 90,000 people will benefit. Latrines will be constructed in urban areas through the private sector this will provide latrine facilities to an additional population of 69,000.

Solid Waste Management and Resource Mobilization Centre Programmes

In Greater Kathmandu two additional transport stations, one new sanitary land fill site and some small compost plants will be developed. Kathmandu and Lalitpur Municipalities will be provided with implements and equipments to be used in the collection, transportation and disposal of filth and garbage. The existing public and mobile latrines will be repaired and their services extended. Besides, in urban areas municipalities as well as local public service associations will be actively involved in the collection of garbage and filth. In other areas municipalities consultancy services and training will be provided in the development of appropriate technologies and management of filth and garbage. The private sector will be encouraged, to participate in resource recovery and recycling as well as in the generation of energy. The concerned agency will provide necessary technical services for these activities.

Training Programme

For the attainment of the targets set in the Eighth Plan, training programmes for different levels of persons will be conducted. These programmes will cover such themes as institutional development, issues related to the consumer/user, drilling for installation of tubewell and construction of latrine.

Research and Development

As efforts made in the previous years for the promotion of lowcost technologies were not adequate, the Eighth Plan, will focus on the development and extension of technologies related to harvesting of rain water, liner's pump, windmill and use of solar energy and other technologies which can be used in drinking water projects. Also, feasibility studies will be carried out to explore the possibilities of tubewells in valleys and uplands.

Long-term District Development Plan

In order to expand and select new sources of drinking water in rural areas long-term district-development plan will be implemented in all the 75 districts through respective District Development Committees. In this regard, a list of potential projects in different Village Development Committees will be prepared.

Establishment of Laboratory Services

Laboratory will be established in all the five Development Regions with the objective of maintaining the quality of drinking water to the required level and monitoring the quality of water from time to time. The labs will also distribute bleaching powder to be used in water for purification. They will also periodically test the quality of water supplied by private and non-government sectors.

Implementation Arrangements

In the proposed Eighth Plan, about 60 percent of the targeted programmes in Drinking Water will be implemented by NGOs and the private sector and the remaining 40 percent by government agencies. Similarly, 54 percent of the sanitation programmes will be executed by the private sector and the remaining 46 percent by government bodies. For this the present organizational structure will be modified and made efficient. This will further enhance the professional efficiency of the manpower employed in the government sector. To make the programme implementation aspect effective, emphasis will be given to on regular monitoring during the Eighth Plan. A high-level committee will be constituted in the Ministry of Housing and Physical Planning, which will design, implement and evaluate drinking water and sanitation programmes launched at national level and coordinate the programme activities of various agencies concerned with drinking water and sanitation. This committee will also decide on the implementation process of drinking water and sanitation programmes launched by NGOs and the private sector.

Details of Expenditure

It is estimated that a total of Rs.6,273 million will be expended on drinking water, sanitation and related programmes during the Eighth Plan period. A description of the expenditure is given in the table below.

S.N.	Programme	Development Expenditure in millions of Rupees
1.	Tubewell programme	334.6
2.	Spring/source protection	72.0
3.	New pipe-based system	924.9
4.	on-going projects	1,342.2
5.	Rehabilitation and extension of drinking water supply within Kathmandu Valley and outside	1,780.0
6.	Maintenance/repair of rural drinking water projects	84.3
7.	Sanitation programme	623.6
8.	Feasibility study, training and research	227.6
9.	Administrative and management expenses	883.8
	Total	6,273.0

Housing and Urban Development

Introduction

Trends in Urbanization

The urban population of Nepal appears to have grown at the rate of 5.6 percent per annum during the period 1981-1991. This growth rate is almost three times higher than the annual national growth rate of 2.1 percent. According to the 1991 census report, the population in the municipality areas reached almost 1.7 million, and is estimated to reach 2.9 million by the year 2000 at the current rate of growth. If we add to these figures the population in urban centres which have not attained the status of municipalities but show all signs of developing into cities, the total urban population in the country may presently reach 2 million, that is, roughly 10.4 percent of the country's total population.

The process of urbanization in areas outside the Kathmandu Valley began in the 1970's. The Terai region has witnessed a rapid rise in urban population as compared to other areas since 1971. Several factors have contributed to this growth, namely malaria eradication, deforestation, construction of highways, development in trade, etc. Besides these, incising migration of rural population to city areas has also caused growth in urban population. In the Kathmandu Valley also there has been rapid growth and expansion of cities.

Apart from the 36 recognized municipalities in the kingdom, there are also smaller city areas and district headquarters or market places with less than 20,000 population. Some of these centres are already developing into large cities and are beginning to play significant role in urban-rural developments. This trend is likely to be intensified in the future.

The Present State of Housing

A house or shelter is the minimum basic requirement for a family's welfare. The term 'housing' also implies accompanying land together with other facilities and basic services. Housing has thus to be considered as the use of available facilities within one's community and as a source of income for the family. For these reasons housing conditions reflect not only the physical facilities enjoyed by individuals but also the economic and social status.

According to a survey conducted by the Ministry of Housing and Physical Development in 1991, there are approximately 3 million houses in Nepal. Of this three million houses are located in municipal areas and 2.7 million in the rural areas. Of the total houses, 50 percent consists of rural huts, 41.7 percent semi-urban constructions and the remaining 8.3 percent permanent structures. Within the city areas in particular, every house is highly occupied and lacks adequate provision of even the minimum facilities such as drinking water and sanitation.

Although the majority of families in city areas own houses, it is estimated that about 25 percent of the city dwellers live in rented houses. The problem of landless families is becoming very acute in both the urban and rural areas, especially in various parts of the Terai region. The present estimate is that about 7 percent of families live in unauthorised settlements. There is also a significant increase in the number of people displaced by natural disasters or low productivity of land.

A close analysis of housing needs reveals a serious nature of the problem. In order to meet the growing housing needs of the people some 23,000 houses in the urban and 124,000 houses in the rural areas need to be constructed annually during the Eighth Plan period. At present an estimated total of 10,500 new houses are being constructed in the urban areas every year, but this falls far short of the present needs. In the rural areas, houses are being constructed at the rate of about 111,000 per year, and though the shortfall is not as acute as in urban areas the demand for new houses is likely to increase especially in rapidly developing rural areas. But in view of the low economic status of the rural population, a large number of families are not in a position to provide for their basic housing needs. The current growth in housing facilities has, therefore, been mainly confined to the middle class and upper class families.

Existing state of the Housing Sector

While a large amount of money has been invested in buildings under Government ownership, many government offices continue to bear a big financial burden due to the compulsion of staying in rented buildings. The Department of Housing along with a network of 75 district offices across the country has so far been carrying out the work of designing, constructing and maintaining or repairing government buildings, places of historical and cultural importance, and providing public service facilities in these sites.

Progress during the Seventh Plan

Urban Development

During the Seventh Five-Year Plan period, the efforts made to develop the regional development centres (Dhankuta, Kathmandu Valley, Pokhara, Surkhet and Dipayal) were aimed at environmental protection, development of physical facilities, optimal land use, social welfare schemes such as employee housing, preservation of archaeological sites and housing development projects, particularly in the Kathmandu Valley. The plan for the physical development for all municipalities were prepared, and municipal level and district-level employees were trained. A Ministry of Housing and Physical Planning was established to consolidate and co-ordinate housing and physical development activities in the urban areas. The Department of Housing and Physical Planning was abolished and two separate Departments, namely, the Department of Housing and Urban Development, and the Department of Building were established. The Department of Water Supply was brought under the Ministry of Housing and Physical Planning. With a view to improving sanitation and Water-Supply systems in the city areas a Water-Supply and sewerage Corporation was established. A Division of urban development was also created within -the Ministry for Local Development. The Local Development Training Centre at Pokhara was converted into Local and Urban Development Training Centre to train civil servants.

The existing laws relating to urban development were replaced by municipal development law, 1988/89. The Kathmandu Valley Development Authority Act 1988/89 was also prepared to expedite the development of the Valley through an Authority. Technical assistance was provided to the local administrative units for preparing development plans. A Town Development Fund was set up in 1988/89 to provide loan assistance to various municipalities. His Majesty's Government also provided loan assistance to some municipalities for implementing the land development programmes.

Housing

A total loan assistance of 35 million rupees was made available to the Town Development Committees of Dipayal, Bharatpur, Lahan, Jaleswar, and for housing development projects in the Dhulikhel municipality. Directed Land Development Projects were also implemented in the designated areas of Kathmandu, Lalitpur and a few other municipalities. The Nepal Resettlement Company has been re-named as the Rural Housing and Settlement Development Company. This company is presently preparing various programmes and plans in order to be economically self-sustaining within a few years.

Progress made during the Fiscal Years 1990/91 and 1991/92

During the fiscal year 1990/91 a pilot survey of housing was completed with the UNDP assistance in order to determine the current housing condition and its growth. This survey made a detailed study of the process in land development, availability of building materials and various other aspects of housing.

A financial company with a capital of Rs.3 million was established to mobilize private resources for the development of housing projects. During the fiscal year 1991/92, the survey on housing condition carried out in the previous year was analyzed and a draft of the national housing policy was prepared. Besides these, a long-term technical programme was drawn up to solve the problems likely to crop up in housing, urban development and settlements. Similarly, the Rural Housing and village Development Company made available 110 hectares of land in some districts of the Terai region.

In the fiscal year 1990/91 under the Singh Darbur Reconstruction Project, the first floor-of the Ministry of Housing and Physical Development and the Ministry of Tourism were constructed along with the initiation of construction of buildings for the Ministry of Industry. During the fiscal year 1991/92 the building of the Ministry of Industry was completed and the second floor of the Ministry of Housing and Physical Development and the Ministry of Tourism are also constructed.

The construction of an International Conference Centre building began in the fiscal year 1989/90 with the economic and technical assistance from the Chinese government, and the basic framework of the building was completed in the following year. During this period, the Nepalese side also began the construction of the security guard house and the garage *which were* completed in the fiscal year 1991/92. By this time, the Chinese side also completed about 90 percent of the main building and its essential requisites.

During the fiscal year 1990/91 various construction and maintenance works were carried out under the programme of preserving and improving the areas of religious and cultural importance in the Kathmandu Valley. These included the construction of a botanical garden entrance gate and roads together with general improvement around

the area of the *Dakshinkali temple*, and the preservation of the botanical garden, and construction of a car parking area, footpath, etc., at the religious site of Seshnarayan temple. Several conservation works were also carried out to protect the botanical area around the Changunarayan temple. In the fiscal year 1991/92 various improvement works such as protection of botanical garden the construction of toilet facilities and compound walls were carried out at the religious sites of Seshnarayan temple and Changunarayan temples, and

improvement of physical facilities were made as per the target around the religious site of Changunarayan temple.

Under the programme for reconstruction of earthquake affected areas, a housing loan scheme and school building reconstruction works were carried out in the fiscal year 1990/91. During the year 322 two-room school blocks were constructed and building materials were provided for 488 Blocks. In the fiscal year 1991/92 additional 795 two-room school buildings were constructed with public support, and the task of collecting building materials is underway for the next fiscal year.

Existing Problems

Problems relating to Essential Urban services

Due to limited resources of the central and local bodies, it has been quite a problem to provide adequate services in the field of water supply, road transport, sewage and sanitation, health, and education. In addition to these, new problems such as increase in traffic congestion, environment and water pollution, inadequate housing, increase in crime rate and illegal settlements in public land have also cropped up. It will, therefore, be difficult in the coming years to fulfil the existing needs and those that are likely to arise in the future.

The rural areas of Nepal have also come under pressure of increasing population as well as social, economic and environmental problems. The municipalities will have to provide housing, employment, training and other basic facilities semiskilled to the rural poor migrating to city areas in large numbers. In these circumstances the long-term solution to the rural development problems would be organized management of urban development potentialities and carrying out of urban development activities as supplement of rural development.

Problems relating to Housing

Housing Companies

There are as yet no housing companies or Corporations at the public or private sector in Nepal. Every individual makes his own financial arrangement, buys the land, procures building materials and supervises the construction of his house. In the rural areas, one's own family members, relatives and neighbours assist in the construction work. Houses are often constructed by stages according to the owner's economic capacity. It is now a common practice in the city areas to supplement the family income by renting out the house or rooms.

Land for Housing

The price of land in the city areas and some of the rapidly developing rural centres has continued rise sharply in recent years. This has made it increasingly difficult for the common people to acquire land for housing.

Loan for Housing

According to a recent study it is evident that an average family requires many years before it can accumulate resources to buy land and materials for constructing a house. There are as yet no government or private financial agencies to provide loan for housing, nor are there any saving schemes specifically for housing purpose.

Essential Public Services and Community Environment

The essential public services currently available to families are not adequate. Recently some communities have taken the initiative to implement service facilities such as water supply sewerage, and sanitation with contributions from the users' themselves for collective use. But certain hurdles are being faced in this type of work particularly in urban areas. In view of the difficult economic condition in the country, these essential services are likely to remain inadequate and will certainly lead to further degradation of the surrounding environment contributions by the users.

Building Materials and Construction Technique

The building materials presently being used in Nepal need to be less expensive, more durable and less likely to cause environmental pollution. Besides the use of less expensive construction techniques, it is also necessary to develop materials that can withstand natural disasters.

Housing and Poverty Alleviation

Housing is not only the need of the poor and low-income group of people but also one of the basic pre-requisite for getting out of the vicious circle of poverty. The ownership house makes it convenient to carryout income generating activities in both the rural and urban areas.

Problems Relating to Building Construction and Maintenance

The construction of a building requires a large financial investment. This is mainly due to the wide use of imported building materials, transportation cost of materials, design requirements, etc. The buildings constructed with such materials and design usually entail further expenses in periodic maintenance and repair for maintaining

their durability. There is no up-to-date reliable data on how many buildings are owned by His Majesty's Government, what their physical designs are, where these are located and how safe they are against natural disasters. Under the circumstances, the maintenance works carried out on these buildings so far have been unsystematic and ad-hoc. When constructing government buildings we need to make use of local resources and materials, and take steps to make these buildings safer than they presently are against natural disasters by improving construction techniques.

Background of the Eighth Plan

The process of rapid urbanization that has taken place from the last decade can neither be halted nor altered. This process should not be viewed merely as a physical development but more as a contributing factor in national economy and national unity.

Hence there is a need to move ahead by consolidating the positive aspects of urbanization. Urbanization is a process which gets initiated and accelerated with the active participation of the private sector. But the structure and quality of urbanization are influenced by the country's physical infrastructure and financial policies. The development of city centre can contribute to the growth of quality services in the neighbouring rural areas, and at the same time generate employment opportunities in modern industries and services.

A close review of the housing sector does not reveal a deplorable situation in rural areas. But when viewed objectively from quality aspect it is imperative gradually to improve rural housing system. Furthermore, economic and physical problems are growing in areas settled by people displaced by natural disasters or low productivity of land. In the case of urban areas the problem of housing is becoming more acute day by day. This can be seen in the unplanned construction of houses, the lack of essential services and the high cost of residential land as compared to average income of city people. Although housing is largely a private enterprise, the government, however, would need to adopt certain policy measures to support and coordinate the individual effort while keeping intact the supreme role of the private sector and individuals.

Objectives

1. To promote urban development as a complementary process to rural development in view of the need to develop urban-rural interlinkages as well as the need for balanced regional development.
2. To promote planned in urban development and management of urban areas by making the process of urbanization complementary to the development of local economy.
3. To increase the construction of new houses and to upgrade the quality of the existing houses by making more land and financial resources available.
4. To raise the investment capability of HMG by using local skills and materials, and adopting low cost designs and improved construction technologies.
5. To adopt designing and construction practices that can create employment opportunities and support local economy.
6. To improve the quality standard of government buildings for their protection against natural disasters like earthquake, flood, landslide, hurricane, fire, etc.

Policies

1. Appropriate policies and programmes will be formulated and implemented to solve problems encountered in the planned development of urban settlements and to address increasing problems of environment degradation.
2. Urban development will be integrated with infrastructure development with the objective of increasing economic and employment opportunities in the industrial sector. The relationship between towns and villages will be improved by developing small townships and market center.
3. Environmental protection will be ensured in urban areas by (a) formulating regulations for land use, waste disposal, sanitation etc; (b) enacting laws for prevention and control of air, water and noise pollution; and (c) providing investment fund to improve and develop existing infrastructure.
4. Places of historical, cultural and archaeological importance will be protected and conserved by adopting appropriate measures.
5. Communities will be directly involved from the very beginning in the planned urban development.
6. Non-governmental organizations and the private sector will be encouraged to invest in urban development programmes.

7. In the areas where the private sector is shy to participate, the government will carry out pilot projects as demonstrations or encourage private sector so as to create a healthy process of urban development.
8. A land development program will be carried out through the private entrepreneurs and Housing Development companies in order to provide housing plots to the poor families in rural as well as urban areas. The land so developed will be provided with the basic physical and social facilities, and unified settlement programme will be implemented in these areas., The Housing companies will also be encouraged to provide services relating to residential land to families of different income groups.
9. Skill development opportunities will be given to the construction entrepreneurs in the rural areas to use improved construction techniques for building better houses with locally available manpower and materials.
10. Suitable measures will be taken to make housing loans available to Housing Development Companies and private finance companies through banks.
11. Local administrative bodies and municipalities will be assisted in the formulation and enforcement of rules and regulations relating to house constructions.
12. The genuine landless households will be identified and housing plots will be made available to them. For this purpose, land will be made available out of barren land, government forest areas and the excess land obtained from land ceiling under the Land Reform Act.
13. As the cost of maintenance and repair of existing buildings will be lower than the construction of new houses, the government will provide technical assistance for this purpose.
14. Research studies will be carried out to upgrade the quality of construction materials and techniques in order to improve the quality of residential buildings and reduce construction costs.
15. Since housing is an essential need of all citizens, the government will adopt an appropriate strategy of making housing facilities available to a maximum number of people rather than emphasizing on providing superior quality services.
16. Financial resources of the private sector will be mobilized in an organized manner and investment in the housing sector will be increased. This will increase the national saving rate and total national investible fund.
17. The bodies under the Ministry of Housing and Physical Planning will provide necessary technical as well as managerial advice and skills to the municipalities, as well as individuals and organizations in the private sector institutionally capability of implementing housing programmes.
18. A national building code including the norms and specification standards will be formulated as guidelines for all building constructions in the country.
19. The design and construction of national level government buildings will be carried out by the Department of Housing, which is the central body in the construction of government buildings.
20. The local masons and craftsmen will be trained so as to make them capable of adopting improved engineering techniques that safeguard buildings against natural disasters.

Targets and Programmes

Urban Development

Assistance to Municipalities

Under the recently enacted Municipality Act 1992, municipalities will be provided with technical assistance, training and programme development orientation in order to raise the organizational capability of municipal bodies in town development. A Town Development Fund Committee has also been set up to provide financial resources to the development programmes being implemented by municipalities. This fund will provide loan or grant assistance to municipalities for implementing growth oriented and revenue-generating projects. Such loans or grants will be made available to municipalities to carry out development protection and expansion of infrastructure in urban areas.

Development of Market centres

An outline of inter-ministerial development programme will be prepared on the basis of survey studies of different areas identifying their potentials for development as business centers. During the Eighth Plan period seven such areas will be selected for development in different geographical regions. In addition to these, studies will be made to develop 29 district headquarters including Kohalpur, Atariya and Birtamod that are not recognized as municipalities as service centres.

Improvement of City Environment

In order to control the rapidly growing environmental degradation in the Kathmandu Valley, it is imperative to make legal and other provisions. For this programmes aimed at assessing the current state of environment pollution, maintaining quality standerise, formulating rules and raising public awareness towards sanitation, waste disposal and air, water and noise pollution, land use and public places will be carried out. This program will be implemented in 15 principal municipalities of the kingdom,

Greater Janakpur Area Development Project

Under this project all the places of historical, religious' and archaeological importance in the Janakpur area will first be identified and phase-wise measures will be taken to preserve and improve them with the objective of developing the Greater Janakpur Area as a tourism center. In the development of this area HMG's role will be that of a coordinator and facilitator than an investor and construction agency. The development activities of this plan will be carried out in three phases. During the first phase a network of main roads and feeder roads will be constructed to connect religious places and to improve transport services within the Janakpur municipality. In the second phase, programmes related to development protection and promotion of infrastructure necessary for the socio-economic development of the area will be carried out. The third phase will seek to consolidate and strengthen developmental activities with particular emphasis on the protection and promotion of areas of religious and cultural importance.

Kathmandu Valley city Development

A program will be implemented to provide necessary prerequisites and create a healthy environment in order to develop city areas in Kathmandu valley in a planned and systematic manner.

Institutional Development

In accordance with the policy of decentralization, the capacity of the central and district-level organizations in formulating plans and implementing projects needs to be strengthened. The government will provide technical assistance and training for municipality personnels, and at the same time conduct programmes to increase public participation in the management of town development programmes.

Housing

Rural Housing for the Landless

Although there is no reliable data on the number of landless individuals or families, this has emerged as a major problem and hence such landless people will be provided with employment opportunities and housing plots. This programme will be supported by other programmes oriented towards social welfare and provision of loans. While arranging settlement for the landless, attention will be given to the provision of basic services and facilities at a low cost. Furthermore, the programme will avoid settlement in areas that are environmentally unsuitable, and also assist in moving people from such areas to other places. In carrying out these tasks, attempts will be made to raise the expenses incurred from the settlers themselves depending on their economic condition. During the Eighth Plan period, some 25,000 families will be provided settlement facilities in coordination with the poverty alleviation program.

Urban Land Development

Among the families living in urban areas, it is how almost impossible for the low income groups to buy housing plot for building houses. For this reason, a plan will be implemented to develop housing land with the minimum of basic facilities. In this programme, however, the required money will be collected from the users. on a long term basis. This programme will cover (a) municipal areas; (b) district headquarters with such needs, and (c) 7,000 plots of land to be developed under the Housing and Public Services programme in market centres.

Financial Arrangement for Housing

The capability of existing financial institutions to extend housing loans will be increased. This will benefit individuals and companies involved in land and housing development. In addition to this, other sources of loan, particularly cooperative loan schemes will also be utilized. Such loans schemes will also be extended to income and employment generating projects, besides housing. A revolving fund will also be established to support land development activities. This fund will provide working capital loans to municipalities, and government as well as non-government agencies engaged in housing and land development.

Formulation of Act and Regulations

The existing laws relating to Housing and Land Development will be revised and necessary laws will be enacted to regulate sale and purchase of land, construction of buildings, land tax, construction of houses for rent,

ownership of multi-storied buildings, etc. These acts and regulations will be prepared with the objective of complementing the efforts of local bodies in resolving the housing problems.

Improvement in Urban Housing

It is less expensive to repair and maintain existing houses than to build new ones. The program of housing improvement will include expansion of water supply, sanitation and healthy environment in and around house premises. In the low-income group areas these works will be carried out through co-operative schemes. It is estimated that 15,000 families will benefit from this programme during the Eighth Plan.

Preparation of Policy on Housing Sector

The national policy on Housing will be finalized, and attempts will be made to strengthen institutional capability of concerned bodies and co-ordination mechanism for gradual implementation of the policy.

Construction of Buildings and Maintenance

The Singha Durbar Secretariat Re-construction Plan

The Singh Durbar Reconstruction Plan is under implementation to rebuild the Secretariat partially destroyed by fire on July 9, 1973 with the exterior in its original design and the interior with modern renovations as the apex administrative center of Nepal by bringing together in one building complex all the Ministries and Departments of HMG which are housed in various buildings around the Valley construct roads, footpaths, drainage system, etc. as well as buildings for banks, post office and library within the premise of Singh Durbar. During the current plan period in addition to construction of buildings to house the Ministry of Housing and Physical Development, and Ministry of Tourism and construction work of buildings for the ministries of Forest and Environment, Defence, Labour and Social Welfare, and Education and Culture will also be initiated.

Construction of Quarters for Ministers and Heads of

Constitutional Bodies

Under this project five more buildings within the premise of the present ministers' quarters, and 11 buildings near the Prime Minister's official residence are planned to be constructed.

International Conference Building

The construction of this building initiated in the fiscal year 1989/90 with the assistance from the Chinese government is expected to be completed in the fiscal year 1992/93.

Project on Building Materials Research and Code

Attempts will be made to identify and develop low cost and pollution neutral building materials which will suit with the traditional construction techniques and also contribute to their development. At the same time, new construction techniques which are less prone to natural disasters will be adopted. In carrying out these tasks, priority will be given to the use of locally available construction materials. Attention will be given to disseminate the knowledge and skills thus acquired to individual households and communities taking the responsibility of house construction.

Project on the Development of the Cultural and Religious Areas of Kathmandu Valley

This project will be implemented to preserve and maintain various areas of cultural and religious importance in the Kathmandu Valley together with measures to protect its environment. This project has a target of preservation and maintaining 14 such religious places.

Project on Re-construction and Rehabilitation of Earthquake Affected Areas

This project has been implemented with a loan assistance from the World Bank to carry out re-construction works for and rehabilitation of families, organisations, and institutions affected by the earthquake of 1988. Under this project structural improvement of buildings and re-construction of schools are being carried out. The project has a plan of reconstructing 6677 two-room school blocks in the 29 districts of the Eastern and Central regions.

Basic and Primary Education Project

This project will be implemented with a loan assistance from the World Bank to upgrade the quality and standard of primary education in 40 districts. Under this project construction works will be carried out by drawing-up of design plans and supervising construction works.

Implementation Arrangements

There are provisions for providing loans and grants to municipalities from the Urban Development Fund to implement developmental works and to initiate income-generating schemes. The programme of providing settlement to the landless people will be carried out through the Rural Housing and Village Development

Company. In this programme various private and non-government organizations will also be involved. Appropriate steps will be taken to encourage banks to provide housing loans to Housing Development and other private financial companies.

Details of Expenditure

During the Eighth Plan period a total of 2304 million rupees has been earmarked to implement various programmes through the Ministry of Housing and Physical Planning.

S.N.	Programme	Expenditure Estimates (in 1000 rupees)
1.	Assistance to Municipalities	340,000
2.	Development of Market centres	39,300
3.	Improvement of City Environment	184,250
4.	Comprehensive Janakpur Development Project	25,500
5.	Kathmandu Valley Development Project	35,900
6.	Institutional Development Programme	500
7.	Housing Programme for the Rural Landless	291,300
8.	Urban Land Development Program	50,000
9.	Financial Management for Housing	30,000
10.	Formulation of Acts and Regulations	1,250
11.	Improvements in Urban Housing	60,000
12.	Formulation of Policy on Housing Sector	2,000
13.	Singha Durbar Secretariat Reconstruction Project	100,000
14.	Housing Projects for Ministers and Heads of Constitutional Bodies	35,000
15.	International Conference Building	14,000
16.	Research Project on Building Materials and code	12,500
17.	Project on the Development of Cultural and Religious Areas of Kathmandu Valley	20,000
18.	Earthquake-affected Area Re-construction and Rehabilitation Project	1,050,000
19.	Basic Primary Education Project	12,500
	Grand Total	2,304,000

Labour and Social Welfare

Labour

Introduction

The pressure of increasing population on limited cultivatable land has caused large-scale unemployment in the agricultural sector. This imbalance between the increase in labour force and lack of job opportunities indicates an under-developed state of the agricultural sector. While many unskilled labourers are compelled to migrate to foreign countries for low-paid jobs, we have not been able to produce more skilled workers as required. In view of the annual increase of workers in the labour market, it is important that we take necessary measures to provide appropriate skills to workers in order to create higher rate of employment opportunities in agricultural as well as nonagricultural sectors and safeguard their interests through reforms in management and thus mobilise the available labour force for the development of the country.

According to preliminary estimates, the statistics on Nepal's labour and employment situation are as follows:

Estimated Supply of Labour Force (1992-1997 A.D.)

(in Thousands)

	1992	1993	1994	1995	1996	1997	1992-97
Total	8,542	8,733	8,927	9,127	9,330	9,540	998
Male	5,120	5,234	5,350	5,470	5,592	5,718	598
Female	3,422	3,499	3,577	3,657	3,738	3,822	400

Employment Situation in 1992

		Total	Male	Female
Total Labour	8,542,000	5,120,000	3,422,000	
Employed	7,892,000	4,758,000	3,134,000	
Unemployed	650,000	362,000	388,000	
Unemployment Rate	7.6%	7.1%	8.4%	

Progress during the Seventh Plan

During the Seventh Plan period various basic training programmes for non-agricultural sectors were conducted to create employment opportunities.

Within this period 7 labour organizations trained a total of 6114 workers in building, carpentry, sewing, weaving, knitting and other skills. The Vocational and Industrial Training Project has also provided training to 737 persons in mechanical skills and ,hair cutting/hair care.

Various study and task force groups collected information and data on the classification of labourers by profession, employment statistics in one area, the effectiveness of training programs conducted by 11 Labour supply Training Centres, preparation of curricula on 6 subject areas, and field research on employment and skill development potentialities in 6 remote areas. A survey was also conducted under the Labour and Employment Services Programme which recorded 1,053 unemployed persons, 763 were given training in various skills, compiled the names of non-Nepali workers and acquired information on job vacancies. Within this plan period 9 firms were also registered to regulate and better organize the foreign employment services. A feasibility study was carried out to establish a Labour and Employment Centre in one Development Zone.

Progress during the Fiscal Years 1990/91 and 1991/92

The 7 Labour Supply centres under the Department of Labour trained 1,881 persons in sewing, weaving, carpentry, building, electrical fittings, machine operation, mechanics, hair care etc. The project on Labour and Employment Research also carried out surveys in 5 districts on the labour market conditions including collection of data and information on the adequacy of workers in the building sector, the effectiveness of training in electrical skills and the number of job vacancies in industrial enterprises. A Vocational Training Centre building was constructed at Rani, Biratnagar.

Existing Problems

Although various projects in the labour sector have been carried out since the Fifth Plan, there are still a number of problems such as the country's low rate of economic development with corresponding inability to create new jobs, lack of co-ordination between employment -policy and its implementation, absence of reliable statistical information on the labour situation and a shortage of basic-skill manpower in the country. There is also the lack of consistent policy and regulations for foreign employment. We have not been able to produce the required number of skilled manpower through regular institutionalized training. During the previous plan periods, attempts were made merely to fulfil the immediate needs of government departments, and the labour organizations lacked adequate resources and training facilities. The laws relating to labour could not be fully implemented as envisaged.

Background of the Eighth Plan

As the mobilization of the available skilled labour force is precondition for the country's development, it is, therefore, imperative that they be properly trained and provided with opportunities for jobs and their standard of living be improved. The Eighth Plan has formulated policies and programmes to mobilize the workers for employment within and outside the country.

objectives

1. To bring about a gradual reduction in full and partial unemployment by maintaining a balance between the demand and supply of the labour force.
2. To produce skilled workers required for development activities.
3. To create appropriate conditions for increasing employment opportunities at home and abroad.
4. To safeguard the basic rights of labourers in a more effective manner.

Priorities

- a. To provide training in basic skills.
- b. To develop skills that are productive and employment-oriented.
- c., To encourage industries that make use of the country's raw materials and its technical skills.
- d. To implement the Labour Act 1992.
- e. To organise training programmes for labourers of backward ethnic communities and in the remote areas.

Policy

1. Further investments will be mobilized from the government and the private sector -on productive enterprises to provide more employment and selfemployment opportunities to the presently unemployed and partially unemployed workers in the agricultural and non-agricultural sectors. As the country has an adequate labour force, policy measures will be adopted for the development of appropriate technologies capable of making greater use of these labourers in agricultural and non-agricultural jobs.
2. As agriculture has the highest potential for using labour productively in the short-term, priority will be given to diversification and intensive development of this sector.
3. Basic vocational training will be given to the rural population in order to develop skilled manpower. The government will assist such trained workers to be self-employed or to obtain institutionalised jobs elsewhere.
4. The policy on the mobilization of the national labour force in the country's industries and other occupations will be implemented in an effective manner. This mobilization will include planned training programmes to improve the productive capacity of various workers and also to organise efficient management.
5. The organizational and legal provisions will be made to systematise the service conditions of all employees. The Nepali workers will also be offered job opportunities in foreign countries, and the regulations governing such services will be improved for the welfare of the workers.
6. The physical and administrative aspects of Labour Welfare centres will be improved in order to mobilize local workers more effectively. In line with this objective, priority will be given to training women workers and helping them learn new skills for employment in the non-agricultural sector.
7. Programmes relating to public works and social welfare activities will be expanded to improve the quality and to absorb larger quantity of the rural labour force.

8. Loan facilities and other assistance will be provided for those who wish to start their own occupational schemes.
9. Technical or financial support will be made available to labour- intensive sectors where opportunities of self-employment schemes can be increased.
10. As a long-term measure, family planning services will be provided in an organized manner to maintain the potential labour force in the country to a manageable size.
11. Employment Information centres will be increased and strengthened to make effective arrangements for providing job opportunities to workers in need of employment.
12. Minimum rates of wages will be determined subject to self-adjustment on a periodic basis to ensure a better living standard of workers.
13. Policy measures will be taken to provide incentives such as tax rebate to employers who invest on the skill development of their workers.

Targets and Programmes

The following programmes will be implemented within the Eighth Plan to fulfil the above mentioned policy objectives.

1. Labour Supply centres

The Labour Welfare centres have been established to promote professional skills in workers in order to increase their productive capacity. The Eighth Plan aims to train some 9,925 workers through Labour Supply centres in Jhapa, Itahari, Hetauda, Butwal, Pokhara, Nepalganj, Dhangadhi, Dang and Mahendranagar in various skills such as masonry, carpentry, sewing, weaving cane-bamboo works etc.

Four new Labour Supply centres will be established at Janakpur, -,Bag lung, Rajbiraj and Jumla. one such centre will be added each fiscal year from the second year of the current plan. These additional centres aim to train further 1,200 workers.

2. Industrial and Vocational Training

The Vocational Training Centre at Rani, Biratnagar plans to conduct a one-year training programme in metal trade of Mechanical Engineering to 150 persons within the Eighth Plan period. The Vocational Training Project at Kathmandu also plans to train 500 persons in hair cutting/hair care, sewing, knitting, carpet weaving, driving and leather craft.

3. Employment Research Exchange and Extension Project

The current plan aims to carry out various research and promotion programmes including the collection of information on the labour market in 50 districts, feasibility studies on the promotion of skilled labour in the districts of inner Tarai, assessment of the effectiveness of training programmes conducted by Labour Welfare Centres in 10 subject areas, preparation of curricula for 5 subjects, collection of information on job vacancies in industrial enterprises established in 10 districts, registration of unemployed persons, promotion of employment in established industries and provision of guiding and counselling services.

4. Employment Promotion

The current plan aims to prepare and enact legal provisions for the improvement of Labour Supply centres and Vocational Training centres on the basis of a review of the existing industrial training programmes. The Labour Act 1992 will also be implemented and evaluated with legal and administrative support.

5. Skill Development Training Programme

A total of 10,000 persons will be given basic training to develop skills and efficiency among local workers.

6. Project on the Consolidation of Vocational Health and safety Measures in Industries

Under this programme the laws relating to vocational health and safety will be reviewed with necessary suggestions. Further, the safety and health standards of workers will be determined, various training programmes will be assessed through regular inspection and testing, and a Central Industrial Health Laboratory will be established within the Eighth Plan period.

7. Consolidation and Dissemination of the Labour Market Information

The training programmes will need to be regulated to improve the unemployment situation in the country and to provide training in such skills that are in demand in the labour market. The current plan has included this programme of information resource in order to train and recommend workers for employment. Under this

programme the Department of Labour will disseminate information on the district-level labour market to the concerned consumers.

Social Welfare

Introduction

Social Welfare is an important sector that contributes to the acceleration of the overall development programme of the country. The social welfare activities thus need to be strengthened to raise the living standards of the socially and economically backward people so that they can participate more fully in the development of the country. The progress made in social welfare programmes will directly benefit the poor and deprived people by providing them with social and economic security. On the other hand, such programs can help to promote public awareness against social problems and evils like increase in crime, undesirable social practices and blind beliefs. Programmes on social welfare can also contribute to development of local-oriented skills and mobilization of resources and manpower for development activities.

-Since the communities living in different geographical areas of the country have different needs and problems, it is necessary to prepare and organize social welfare programmes that are appropriate to local conditions. Such programmes have been conducted by various social organizations independently, but with the establishment of the Social Services National Coordination Council in 1977 attempts are being made to institutionalize and co-ordinate the social welfare sector. Following the establishment of the Ministry of Labour and Social Welfare during the second year of the Sixth Plan in 1981, policy guidelines and programmes in the social welfare sector have been implemented as an integral part of the country's development. HMG has accordingly conducted various programmes in social security, technical training, research and workshop/ seminars. Further, various non-governmental organisations have also carried out community development projects under the auspices of the Social Services National Co-ordination Council (SSNCC).

Progress during the Seventh Plan

a. Government Sector

During the Seventh Plan period 10 social welfare programmes were conducted in the areas of training, research and workshop/seminars. In the field of training, 470 women from the backward communities of Deuki, Vadi and other less privileged people were trained in various skills. A total of 1,843 students from the Oche, Macaw, Chepang and C communities were provided with scholarships under the Social Security Scholarship Award programme. Another 10 children from the Vade Deuki and Band communities were also brought to Kathmandu to receive boarding school education in order that they can be trained in leadership qualities and participate in local development. A project to socialize the nomadic Rate people was initiated by introducing them to the life of a near-by village. This project was conducted under the Rehabilitation and Research programme on the Rate people. Further research works were also carried out in the social and economic aspects of the backward communities like the Rami, Musahar, C and Kaki. With a view to bringing about social reforms, a total of 13 seminars were organized on the evils of undesirable social practices.

A Central Division for Women's Development was established during the fourth year of the Seventh Plan under this ministry to co-ordinate inter-regional activities and programmes in women's development in various parts of the country. This Division made assessments of women development programmes in the fields of **agriculture**, forestry, local development, industries, education and health which were conducted by the concerned ministries. The Division also publicized information relating to women's development, and provided skill-based training to 75 young women who have returned home after being abducted and forced into a socially degrading profession in foreign countries.

The programmes on social welfare conducted within the Seventh Plan period have made commendable progress in training people from the backward and deprived communities to learn and use certain skills, but there is no statistical information on how many of them are gainfully employed.

b. Non-government Sector

Various programmes relating to education, health and the welfare of children, women and youth were implemented by some 509 organizations under the auspices of the Social Services National Co-ordination Council. These organizations were affiliated to carry out specific projects on child welfare, health and community development especially for the poor and under-privileged people.

The Council also organized training programmes and workshop seminars to maintain proper co-ordination among various social service organizations. The organizations on health provided such services as first-aid, blood transfusion and ambulance while the Family Planning Association provided family planning services to 118,123 people. Within the Seventh Plan period, 5 Eye Hospitals were established for the treatment of eye diseases and prevention of blindness. The plan also gave priority to the treatment of eye diseases by organizing

mobile eye camps, distributing Vitamin A medicines and conducting 'Save the Child' campaign on a regular basis. In addition to these, the treatment of leprosy as well as homeopathic and ayurvedic health services were provided. A centre for the disabled and deprived people named the Khagendra Navajivan Kendra was established along with service centres in 5 districts, schools for the blind in 12 districts, schools for the mentally disabled in 7 districts and schools for the deaf in 4 districts, which provide basic education and vocational skills.

Under the child welfare programme, several child welfare homes have been established for the poor and orphan children. Pre-primary education has also been provided to 7,200 children in 78 nursery classes of various districts, and food was distributed to 1,90,000 children and lactating mothers.

A total of 958 women have been benefited by income generating schemes such as silk-farming, redeemed garments, oil processing, sale of betel leaves, carpet weaving, knitting of handloom cloth, bee-keeping, fishery etc. conducted under the Women's Development programme. On the education side, 1,580 women were made literate and 54 of them were awarded scholarships.

Various community development projects on health education, agriculture, drinking water, resource conservation, training in income-generating occupations, child development, food and nutrition, afforestation, sanitation and family planning were carried out in 63 areas of 25 districts.

The youth, Hindu, natural disaster and relief-funds have provided funds for education, health, repair of temples, and rehabilitation of the victims of earthquake, fire and flood.

The effective role that the non-governmental organizations have played in improving the living conditions of the rural population during the Seventh Plan period clearly demonstrates the importance of their contributions to economic and social development. The country would need appropriate policies and well-regulated means of implementation to maintain and develop this trend.

Progress during the Fiscal Years 1990/91 and 1991/92

According to the targets set for the fiscal years 1990/91 and 1991/92, social security scholarships will be provided to 952 students from poor, unemployed families; 10 children from the Deuki and Band communities will be brought to Kathmandu to be given boarding school education under the social security and development project; and support will be sought from possible donor agencies for the implementation of the project -to rehabilitate the Rate people. The establishment of social welfare centres in Nepalganj and Mahendranagar are also underlay.

Existing Problems

1. The social welfare programme at the government and non-government levels did not achieve the expected results during the Seventh Plan. This has been due mainly to the lack of resources, inadequate programming and technical support in implementation and evaluation of programmes at the non-government sector. The organizations under the non-government sector have failed to make progress due to government interference and administrative procedures such as registration and renewal controlled with red-tape.
2. The social welfare programmes implemented under the government and non-government sectors also lacked basic co-ordination among various organizations. There is still a clear lack of exchange of information and ideas about programmes and problems of implementation.
3. The programmes formulated to assist the blind, the disabled, the poor and deprived people have been adhoc and ill-planned.

Background of the Eighth Plan

The Eighth Plan will give primary importance to the social welfare sector to improve the social, economic and physical conditions of the people and to remove such social evils such as superstitions and blind beliefs.

The government sector has been conducting numerous social welfare programmes. The non-government organizations have tended to concentrate their activities in the capital and other urban areas. In this context, it will be necessary for the government sector to provide clear policy guidelines on social welfare schemes, and the non-government organizations need to extend their programmes to the rural areas.

Objectives

1. To upgrade the living standards of the socially, economically and physically handicapped sections of the people so that they are able to benefit from social welfare programmes and participate in development activities.
2. To promote public awareness against undesirable social beliefs and practices in order to bring greater social welfare and security.

3. To mobilize the non-government organizations so that they can make more effective contributions to the social welfare sector.

Policies

1. The government sector will make provisions for policy guidelines and legal support to facilitate the social service programmes run by the non-government and private organizations.
2. The government and non-government sectors will maintain close co-ordination to make the social welfare programmes more effective.
3. The government will make every effort to gradually eliminate the existing social evils in the country and safeguard and promote exemplary social values, norms and specialities through people's participation.
4. The government will encourage a greater use of local resources and mobilize public participation in social welfare activities through non-governmental organizations at the village and district levels as visualized in the policy of decentralization.
5. The integrated community development programmes will be made more effective for the social and economic benefits of people living in the backward areas. A proper co-ordination will be maintained between the government and non-government sectors when implementing such programmes in order to avoid duplication of efforts.
6. The private and government sectors, the social welfare organizations and local development agencies will be made more service-oriented and social welfare programmes will be implemented with maximum public participation.
7. The prevailing traditional but desirable social values will be upheld and preserved by discouraging various social evils such as undesirable customs and beliefs as well as wasteful or unproductive expenditures. A variety of activities such as seminars, cultural programmes and publicity campaigns will be organized by the government and non-government organizations to promote public consciousness against such evils.
8. The government will undertake feasibility studies, research and surveys in order to implement appropriate welfare programmes for the backward communities and those who are below the poverty-line.
9. The role of the social welfare sector will be strengthened by mobilizing the social organizations to participate more fully in national development projects such as population control, development in education and basic health services.
10. The social welfare centres run by the government will be consolidated and developed to strengthen social security and a gradual improvement in the welfare of old-age labourers will be brought about.
11. A series of rehabilitation programmes will be undertaken for young women who have been compelled to take up socially degrading professions. These programmes will be designed to make the women self-sustaining through the learning of occupational skills such as functional literacy, nutrition and health education, vegetable farming, tree-planting and preservation of the environment.
12. Such skill-development programmes will be given priority and developed in an effective manner for the benefit of people who live below the poverty-line and, in particular, the women from socially-deprived communities.
13. The government sector will take effective measures to safeguard and promote social security of the handicapped, the children, the aged, the youth and the physically disabled people. Such humanitarian measures will ensure a normal and decent life for the weaker sections of our society.
14. A scholarship scheme and boarding school education will be arranged for the physical, mental and intellectual development of the disadvantaged children from the poor and socially-deprived families according to local needs.
15. The existing acts and laws against the prevalent social evils, aberrations and problems will be amended or new laws enacted if necessary.
16. The Social Service National Co-ordination Council and other non-governmental social organizations will be made more public-oriented and brought into the mainstream of national development programmes.
17. The said Council, its affiliated organizations and other social organizations will be made to support the government services being provided to victims of natural disasters.
18. The international non-governmental organizations will be requested to co-ordinate with the local social welfare units in conducting welfare programmes.

19. The non-government sector will be encouraged to support government efforts to prevent environmental degradation caused by deforestation, water pollution and establishment of mines and factories.
20. The government sector and other social organizations will be inspired to take measures to discourage begging as a way of life and campaign against drug abuse and for public awareness including the treatment of drug addicts.
21. The religious and social organizations will be directed to play a more active role in maintaining the social and traditional values of our religion and culture by inspiring the new generation to follow the ethics of character-building and devotion to our duties.
22. Persons or organizations who have made commendable contributions to the social service sector will be recognized and awarded letters of appreciation, life membership etc.
23. The policies and administrative mechanisms will be simplified and clearly spelled out in order to encourage a more fruitful participation of the government and private sectors in social welfare programmes. The non-governmental organizations will also be supported by incentives so that they can significantly engage in creative public works in addition to complementing and supplementing the services of local government agencies.

Targets and Programmes

1. Reform and Development of Social Welfare Centres

Four social welfare centres have been operating in Tallyho, Rajbiraj, Biratnagar and Barging with the set objective of improving the living standard of the poor and socially deprived children and old people. At the Panchadedwal temple in Kathmandu, charitable feeding of some 200 persons is being organized on a regular basis. The current Eighth Plan aims to expand 4 social welfare centres, to establish 8 new centres for housing 492 orphan children, and also to establish 4 homes for the care of 200 old people.

2. Social Security Scholarship Scheme

This scholarship scheme has been operating since the fiscal year 1983/84 with the main objective of providing secondary level education and further training for job opportunities to the orphaned children from the backward communities of Oche, Macaw C, Jirel and Deuki. The Eighth Plan aims to expand this scholarship scheme to 2,500 children on monthly scholarships and 1,500 children are to be given -lump-sum financial assistance to enable them to complete their education.

3. Social security and Development

This programme has been operating since the fiscal year 1986/87 to bring reform to the traditional life-style of the Deukis by educating their children in a different environment from their own. The programme for this reason has been providing boarding school education to 10 children from the Deuki and Band communities of Dadeldhura and Baitadi districts in the Mahakali Zone. The education of these 10 children will be completed within the Eighth Plan period.

4. Rate Rehabilitation Programme

This programme has been operating since the fiscal year 1982/83 to rehabilitate the nomadic Rate tribe who" move along the forests and river banks stretching from Bardiya to Darchula districts. The Centre for Economic Development and Administration (CEDA) has conducted research on the rehabilitation of the Rautes. The Eighth Plan aims to co-ordinate with the government and non-government agencies for providing housing and basic needs to 375 Rautes.

5. Skill-oriented Training Programme

This program has been operating since the fiscal year 1982/83 to provide skill-oriented training to socially and economically backward village women so as to increase their employment opportunities. Within the Eighth Plan period it is estimated that some 750 women in 25 districts will be trained and provided with job opportunities through mobile training facilities. The women so trained will be encouraged to start self-employment schemes for which the Nepal Rastra Bank and other Commercial Banks will provide loan facilities.

6. Women's Welfare Home

This Welfare Home has been operating since the fiscal year 1983/84 to provide training in certain vocations to the women engaged in socially degrading professions in order to make them useful citizens. Some 125 women practising such a profession at home or on return from foreign countries will be trained in self-employment vocations during the Eighth Plan. These women will also be used to initiate public campaigns against the evils of prostitution and women trafficking.

7. Women Development Program

The Women Development Programme has been operating since the fiscal year 1989/90 to co-ordinate and avoid overlap in the various programmes run by different ministries and to increase women's participation in the campaign for national development. This programme also aims to establish coordination agencies at various levels, and to facilitate the exchange of information on women development activities at the source or the centre and to study and prepare, reports on various activities conducted under different agencies during the Eighth Plan. Such activities will also be reviewed and evaluated periodically, and be given policy guidelines together with required support and services.

8. Social Survey and Research Programme

This programme has been initiated to collect information and statistical data on the number and distribution of physically handicapped people together with their social and economic conditions. Such social profiles will be prepared on the basis of surveys in 15 districts of the country.

9. Rural Self-employment Development Programme

This programme has been undertaken to modernize and develop self-employment vocational schemes. The programme in particular aims to upgrade the traditional caste professions of the shoemakers (Sarki), tailors and flute players (Damai) and goldsmiths' (Sunar) by providing them with modern technical skills. This programme will be implemented in 10 districts of the kingdom during the Eighth Plan. The programme also intends to train a total of 600 persons at the rate of 60 persons from each district annually.

10. Social Awareness Programme

This programme will be implemented in 15 districts to arouse public awareness against various social evils and superstitions and to uplift the society by eliminating them. It also aims to acquaint social workers with new and more practical approaches to these problems. At the same time, the programme has an aim to organize seminars involving participation of 750 persons at the rate of 50 persons from each of the 15 districts, and provide training to 75 persons at the rate of 3 persons from each district. In addition to this, various materials relating to social work, social welfare and social service such as manuals, information bulletins, directories and training equipment will be prepared.

11. Children Homes

Two children homes, each will be established in Pokhara and Kathmandu to provide permanent lodging to children who have been compelled to live by begging or other anti-social activities. Presently 50 children each from Kathmandu and Pokhara are to be trained in certain vocational skills in view of the undesirable effect of street-begging on the tourist industry.

12. Bonded Labour Reform Program

The practice of bonded labour is prevalent in the Western Terai districts of Dang Banke, Baradiya, Kailali and Kanchanpur. According to a survey conducted during the fiscal year 1984/85, such labourers (in particular the Tharu people) are compelled to live a life of slavery. This program aims to provide educational and vocational training opportunities to the children of these labourers so that the oppression and exploitation of these people can be gradually removed. Within the Eighth Plan it is expected that 20 bonded labourers together with their children from each of the chosen districts will be made literate and given vocational training of six months.

13. The Ministry of Home Affairs will take steps to implement effectively the social welfare programmes relating to control of drug abuse and relief of natural disaster victims.

Non-government Sector

The Eighth Plan. Programmes

The programmes to-be implemented by the Social Service National Co-ordination Council and its affiliated organizations during the Eighth Plan are as follows:

a. Child Welfare

Various programmes will be implemented for the physical, mental and intellectual development of the poor and orphaned children. Within the Eighth Plan the child welfare programme aims to start 557 nursery classes, provide vocational training in 57 areas, open 186 child day-care centres, and award security scholarships to 2,814 students, ordinary scholarships to 88, 020 students and family scholarship to 550 students. In addition, vaccination and basic health programmes will be implemented to benefit a total of 132,000 children. There are at present 15 non-governmental organizations operating under the child welfare programme.

b. Health Services

A wide range of Health Service Programmes are being implemented and these include the Eye Hospital, family planning, cholera control, natural disaster relief work, of ayurvedic and yoga treatment, natural therapy and

nutrition programmes. A total of 1,550,000 patients are expected to benefit from medical services provided by 8 Eye Hospitals during the Eighth Plan period. The programme will include permanent sterilization of 48,427 persons and temporary sterilization of 745,397 persons under the family planning project. It is estimated that a total of 140,000 tuberculosis patients will be treated within the 5 years by operating a 45 bed T.B. hospital. The programme also aims to implement projects on natural disasters, blood transfusion, drinking water etc., and provide food aid to 9,50,000 persons. Presently, 46 non-governmental organizations are engaged in implementing these programmes.

C. Poor and Handicapped Service Programmes

These programmes have been operating to provide essential services to the blind, physically handicapped and mentally retarded children so that they can have the basic opportunities in life. The Eighth Plan aims to operate 11 hostels for the disabled, provide basic education to 375 children and vocational training to 305 children. Further, the Disabled Children Hospital will provide artificial limbs to 120 children, and arrange for physio-therapy and health examination services. The Plan also aims to run schools for the blind children, arrange for regular eye tests, their housing and training.

Among the other programmes, 56 child day-care centres, 121 schools, vocational and income-generating schemes will be implemented under the welfare programme for the mentally retarded. Similarly, the Plan aims to run 22 schools for the mentally retarded children in order to provide vocational training. The children of leprosy patients will be given hostel facilities as well as health examination and curative services. Presently, there are 12 nongovernmental organizations operating under this programme.

d. Community and Rural Development

Community development programmes have been operating in 27 districts of the kingdom with assistance from various donor agencies for the specific purpose of encouraging public participation in development activities based on the use of local resources and manpower. These programmes include those relating to agriculture, health, education and forest development. Other development projects on drinking water, health and hygiene, construction of schools, tree plantation, livestock breeding, income-generating vocations, irrigation etc. will be implemented during the period of the Eighth Plan.

e. Services for Women

It is essential to do away with the prevalent social evils to enable the Nepalese women to participate on an equal footing in the religion, political and intellectual development of the society. With these aims in mind, various programmes on women development have been operating under the SSNCC. The eighth Plan aims to train 750 women in vocational skills, 250 women in health and maternity care, run primary education classes for 2,250 girls and organize 25 workshop seminars. Presently, there are 32 non-governmental organizations involved in running these programmes.

f. Educational Development

Informal education programmes are being conducted for the benefit of women and children from backward communities. Such programmes will continue during the Eighth Plan. one non-governmental organization is presently engaged in running this programme.

g. Control of AIDS and Drug Abuse

A programme has been implemented to arouse public consciousness against drug abuse and to take measures, although limited, for the treatment and re-habilitation of drug addicts. Similarly, attempts are being made to publicize preventive, measures against AIDS. During the Eighth Plan, the campaign against drug abuse and AIDS will be undertaken on a wider scale by organizing conferences, seminars and media publicity. There are presently 5 nongovernmental organizations taking active part in this programme.

h. Environmental Protection

Several environmental protection programmes are being implemented in view of the adverse effects of increasing deforestation on the country's environment. These programmes seek to remove the present imbalance in the environment through tree plantation, forest and land protection as well as the conservation of wild life. The Eighth Plan will accordingly aim to intensify conservation activities and at the same time, implement programmes relating to health and cleanliness. At present, there are 14 non-governmental organizations involved in this programme.

i. Moral Development

Various programmes are being conducted to strengthen the moral, spiritual and cultural character of the Nepalese society. The objectives of the Eighth Plan will be to implement several programmes including the organization of 1,270 religious talks and functions, communal initiation ritual ceremony for 3,070 persons,

fund-raising activities and repair/maintenance work on 59 temples and other places of worship, There are at present 60 non-governmental organizations *which are* taking an active part in implementing these programmes.

j. Youth Activities

A large number of social organizations have been conducting various youth activity programmes to promote and develop the dynamic vigour of today's youth for productive purposes. The Eighth Plan aims to initiate income generating projects and also institute 10 literary awards. A total of 192 non-government organizations are presently engaged in implementing such youth activity programmes.

Details Of Expenditure

The Eighth Plan has proposed to spend 115 million rupees for development activities under the Labour and Social Welfare Sector. His Majesty's Government will provide a grant assistance of 75 million rupees to the non-government sector for operating various social welfare programmes. In addition to this, the SSNCC and the numerous organizations under it will supplement the expenditures from their own internal funds and those received from foreign donor agencies.

**Labour and Social Welfare
Total Expenditure Statement**

Name of Project	Estimates in (Thousands of Rupees)
Labour:	
1. Labour Supply centres (9)	53,400
2. New Labour Supply Centre (1)	10,360
3. Vocational Training Centre (Industrial), Biratnagar	2,000
4. Vocational Training Centre, Kathmandu	2,500
5. Employment Research Exchange and Extension	2,000
6. Employment Promotion and skill Development-	1,000
7. Safety and Health in Industrial Profession	1,050
8. Labour Market Consolidation	500
Total	72,750
Social Welfare:	
1. Social Welfare Consolidation	13,250
2. Social Profile Surveys	1,000
3. Rural Self-employment Schemes	4,000
4. Social/Public Awareness	2,000
5. Child Labour Centre	2,000
6. Rehabilitation of Bonded Labourers	3,500
7. Social Security Scholarships	3,000
8. Social security and its Development	800
9. Rehabilitation of Rate Tribe	Boo
10. Women Development Programme	11,900
Total	42,250
Grand Total	115,000
Social Welfare: Miscellaneous	
1. Social Service National Co-ordination Council (SSNCC)	75,000
2. Prevention of Drug Abuse	6,000
Total	81,000

Local Development

Introduction

Attempts have been made since the Third Plan period to raise the living standard of the general public by meeting their basic needs, and by developing leadership qualities, skills and resources for local development. But these attempts have not been successful largely because these were merely confined to slogans rather than to effective implementation. For the success of any local development programmes. The local people themselves need to be involved more actively both at the planning and execution levels. As both the producers and users communities consulted the primary agents of local development they need to be provided with financial and technical support and also the discretionary power by creating suitable environment. In the present context, programmes to be implemented under local development will need to be oriented towards raising living standard of poor communities, developing backward areas, establishing new public infrastructure or maintaining the existing ones, helping people to attain self-reliance in the supplies of food- grains and fuel- resources, and creating employment opportunities in the local areas.

Progress during the Seventh Plan

The programmes that were formulated and implemented during the Seventh Plan period for local development on the basis of local felt needs and priority included training, remote area development, women's development, integrated rural development and other local welfare programmes. The progress status of some of these programmes as follows:

The six Local Development Training Centers in Jhapa, Janakpur, Jiri, Jawalakhel, Pokhara and Nepalgunj had planned to conduct seminars and train 25,002 persons during the Seventh Plan, but the actual achievement was training 16,502 persons. Similarly, the five Women's Training Centers in Dhankuta, Jawalakhel, Pokhara, Surkhet and Dipayal had a target of training 4395 women but a total of 5447 women were trained during the period.

Among the 200 projects on drinking water, school, housing and others that were implemented under the Remote Area Development Programme, 37 drinking water projects were completed, benefitting some 8 thousand people. The other 106 projects completed during the period were related to the construction and maintenance of monasteries, temples, schools, retaining walls and warehouses. As regards irrigation, as against the target of irrigating 300 hectares of land, only 255 hectares were irrigated. Regarding the target of constructing 65 suspension bridges, only 41 were constructed. Similarly, of the target of constructing 300 kilometers of mule-track only 200 kilometers were constructed. Of the, target of taking 250 Buddhist lamas to the tour of different places of the country under the 'Know your country' program, only 200 lamas were taken to the tour.

The Ministry of Local Development was able to implement Women's

Development Programmes aimed at upgrading the socio-economic conditions of the rural women in 49 districts by the end of seventh plan. One of the activities under this programme consisted of a household survey of 30,367 women for initiating income generating programmes. Out of the total surveyed women, 2,263 women groups, were formed covering 10,188 family members. Some 239 thousand women were benefitted by various community development programmes, and 10 thousand women benefited from loan facility of 29 million and 383 thousand rupees made available by various banks for agriculture, 1 livestock, cottage industries and service business;. A total of some 39,900 persons have also benefitted from training in various fields.

The Ministry of Local Development provided zinc sheet roofing materials to 6,040 schools during the 'Seventh Plan period. Several programmes under Integrated Rural Development Project, Praja Community Development Scheme, Bhaktapur Development Project, Banepa and Dhulikhel Development Project, Population Education Programme, etc. were other local development projects implemented during this period.

Progress during the fiscal years 1990/91 and 1991/92

During the fiscal year 1990/91 a total of 3,305 men and women were trained out of the targeted figure of 3,443 persons. Similarly, a total of 2,396 persons were trained during the fiscal year 1991/92 out of the targeted figure of 2,756 persons. in addition, 726 persons were trained in various fields such as environment conservation, animal husbandry, horticulture, grain storage, bee- keeping, etc., under various Integrated Rural Development Projects.

The Remote Area Development Programme implemented 12 drinking water supply projects out of the total targeted number of 16 such projects, benefiting benefited some 3 thousand people. Regarding -irrigation, 20 hectares of land were brought under -irrigation out of the targeted area of 30 hectares. it is estimated that some 10 thousand people have benefited by the construction of, 12 out of 16 suspension bridges. During the fiscal year 1991/92, 34 out 40 drinking water supply projects are expected to have been completed, which will benefit some

7 thousand people. out of 18 irrigation projects targeted, 15 are completed irrigating about 100 hectares of land. During the year, 7 out of 14 targeted suspension bridges are expected to be built, and 12 out of the target of 15 kilometres of mule-tracks roads are expected to be completed. It is also estimated that 22 out of the targeted 23 projects relating to the development of monasteries, schools and electricity supply are completed.

During the fiscal year 1990/91, under the Women Development Programme a household survey of 6,650 women was conducted for income generating activities and 752 loan groups were formed, covering 4,949 family members. These groups were provided credit totalling 4 million and 964 thousand rupees by various banks. The Community Development Programmes benefited some 13 thousand people, and about 11 thousand people were given training in different fields. Similarly, in the fiscal year 1991/92 a total of 6,867 households were surveyed for income generating activities and they were grouped into 803 loan groups, covering 4,915 women. It is estimated that a loan of about 5 million and 720 thousand rupees have been made available to these groups. The Community Development Programme benefited some 17 thousand people and more than 15 thousand people participated in various training programs.

Under the school roofing programme, a total of 1,446 school buildings were provided with roofing materials during the fiscal year 1990/91, and it is estimated that 1,500 schools will receive this facility during the fiscal year 1991/92. During these fiscal years, various projects including agriculture, education, drinking water, forest development, settlement of landless people, health, cottage industries etc. are being implemented under the Praja Community Development Programme.

Existing Problems

Despite the planned efforts made during the past decades to speed up the process of development and reduce the extent of poverty in the country, the actual outcome has been very disappointing. The fact that Nepal is ranked as one of world's least developed countries with a large segment of its people living below the poverty-line is a clear indication of wide-spread poverty in the country.

The previous rural development programmes were prepared from the Center with the objective of achieving target growth in overall production. As the rural development programmes were implemented without the participation of local people, the benefits did not

percolate down to the intended section of the people. The excessive control of the Center over local development programmes led to ineffective implementation due mainly to the lack of local initiation and enthusiasm. Although the policy of decentralization was advocated in implementing these programmes, administrative and financial aspects could not be decentralized. Control of almost all the local development programmes by the Center made the local bodies virtually powerless. This centralized nature of administrative system together with its highly bureaucratic practice has alienated the general public to a status of ruler-ruled relationship instead of civil servants-citizens relationship. This tendency to centralize the authority of the bureaucratic system together with its dependence on political patronage and lack of commitment and service-motive towards the people made it difficult for the government to render timely services to the people. The lack of clear cut policy guidelines, contradictory policies and the absence of public participation in financial management and programme implementation not only raised the cost of implementation but also reduced the quality of its services. The lack of integration of local bodies, the Integrated Rural Development programmes and other projects with the local Training Centers resulted in the unco-ordinated training activities.

One of the main factors for the failure of the previous rural development efforts was faulty programming. When preparing a programme, little attention was given to balanced investment on a regional basis. Furthermore, there were no attempts to mobilize local resources and manpower and that the programme entirely depended on external aid. As a consequence the programmes failed to create the required base for self reliant and sustainable development.

It will be necessary under these circumstances to conduct training programmes with the view of producing the manpower required for local development projects, improving the efficiency of officials and training local leaders and social workers to make them more responsive to development efforts. Other rural development programmes need to be focussed on increasing production and employment opportunities and creating basic infra-structure for development. Special efforts will have to be made to develop the socio-economic conditions of people living in the northern parts of the country and other backward communities so that they can participate more fully in the process of national development.

Background of the Eighth Plan

One of the main objectives of the Eighth Plan will be to raise the living standard of the rural population and to overcome their economic backwardness. In order to achieve this goal, all the efforts to be made by the government in economic, political, social, cultural, religious and educational sectors will be focussed on

fulfilling the local needs. The past experiences have shown that substantial development cannot take place without effective implementation of programmes right from the initial stage. For this reason, the participation of local people will be encouraged in project planning and implementation and sharing of benefits. In line with this approach, HMG will adopt effective policy of decentralization with regard to political, economic and administrative matters and bring about better co-operation and co-ordination among local political organizations, private and non-government organizations and farmers or other community organizations. In this context, the old organizational structures will be revived and geared more fully in local development activities.

Objectives

1. To improve the economic and social conditions of backward regions.
2. To make rural families self-reliant by improving their socio-economic conditions..
3. To upgrade the socio-economic status of the rural population and deprived backward communities. maximizing peoples, participation in rural development works.
5. To develop the basic infrastructure in the rural areas.
6. To increase employment opportunities. in the rural areas.
7. To reduce regional and ecological imbalances.

Policies

1. Rural Development Programme will be carried out with the active participation of local bodies.
2. Rural development programmes will be oriented towards the development of rural infrastructure such as, rural transportation, irrigation, water-supply, school buildings, health-posts, small hydroelectric projects, etc.
3. Productivity of production, activities generating income as well as employment opportunities will be increased with the maximum mobilization of available resources, skills and technology in order to fulfil the felt needs of the local people.
4. Special socio-economic programmes will be launched for the well-being of socially and economically weaker sections -of the -rural population, ethnic tribes and women. District-level line agencies or project offices will be instructed to compulsorily set targets that can directly - benefit the deprived members of the community, while preparing the annual development programme.
5. Women's Development Programme will be integrated with the programme of District Development Committee, and women's self-reliance institutions will be promoted.
6. Non-government organizations will be encouraged in programmes that will directly benefit the target groups, with HMG will playing only a supportive role. Directions will be given to these organizations to avoid no. 1 duplication in programmes and make the programmes complementary to each other.
7. Necessary manpower, resources, and technical support will the provided to local bodies in order to enable them to effectively implement and manage development programmes; and the existing Training Centers will be strengthened to effectively conduct training programmes.
8. In order to improve ecological unbalance, local level programmes will be carried out with due consideration to environmental conservation.
9. Use of local technologies will be encouraged in local development works and programmes will be launched to increase production, and productivity and employment opportunities by exploring and making use of local resources and technologies.
10. Arrangements will be made to provide a block grant by exploring and making use of appropriate technology local development works on the basis of appropriate criteria and keeping in view the availability of local resources.
11. Local peoples participation will the increased in the implementation of production oriented and rural service programmes by involving them right from the project formulation stage and by revitalizing local users' committees.
12. Arrangements will be made for job security, career development and training, of field level staff in order to increase their motivation towards work.
13. Special emphasis will be given to update the collection and processing of local data in order to formulate district level programmes as per local need. It will be made compulsory to use collected data in the formulation of plans.

14. All local-level development activities will be made transparent and their financial transactions will be audited.

Targets and Programmes

The Eighth Plan will implement a two-tier programme at the village-level and the family-level for rural development. The village-level programme will focus on the development of physical and institutional infrastructure including the construction of roads, bridges, schools, drinking water and irrigation schemes, health posts etc. These programmes are expected to support the socio-economic development of local areas and also benefit the poor directly or indirectly. Since the village-level programmes cannot fulfil the felt needs of poor families, a targeted programme will be implemented. Under this program, various schemes such as production loan, training, employment, education of children, mother and child nutrition, etc. will be carried out on individual as well as group basis. The participation of local organizations will be increased while formulating and implementing all types of village-level programmes. For this the capability of local organizations to formulate and carry out plans and programmes will be strengthened. It is evident that the private and non-government organizations are more effective in carrying out development programmes from the view point of flexibility, cost-effectiveness and initiative. In the present democratic context, HMG will seek to encourage the participation of private, community or other non-government organizations in rural development works. The government will formulate appropriate rules and regulations and create a conducive environment in order to increase the participation of private, community and non-government organizations.

The present government has adopted the policy of gradually increasing the annual budget expenditure for the upliftment of deprived families and the rural areas upto 70 percent of the total development budget. The local organizations will require funds to develop basic infra-structure for rural development. The government will carry out a feasibility study of setting up a separate "Local Development Fund" to provide financial assistance to Village and District Development Committees.

The Eighth Plan proposes to implement the following programmes for improving the socio-economic conditions of the rural population:

a. Training Programmes

As the training programmes conducted in the past were not compatible with local needs, the lower-level administrative and technical staff engaged in rural development could not develop their professional competence. Furthermore, the training programmes were not integrated with production programmes and hence their effectiveness remained very low. So the training programmes to be conducted during the Eighth Plan will be focussed to meeting local needs. While conducting training programmes at the local level, attention will be given to upgrade the competence of the elected officials and local staffs. In addition to this, programmes that enhance the management, resource mobilization and resource use capability of local bodies will be encouraged. Similarly, training programmes oriented towards developing skills and employment opportunities for women for making them self dependent, as well as programmes on child care, nutrition and family planning for raising family standard will be implemented. All training programmes will be conducted on the basis of the specific needs of local organizations and users groups skill oriented training. will be made more professional and integrated with loan facilities.

A separate Act will be formulated during the Eighth Plan to provide autonomous status to the training centers, The Women's Training Centers, Local Development Training Centers and Municipal Development Training Centers presently operating in the country will be covered by this Act. A Training Council to be set up under this Act will be made more professional, functional and self sustaining. Under the Training Council a Center for production of necessary training materials will be established to fulfil the need of training centers. Besides these, a research study will be carried out to assist local bodies in the preparation and implementation of local development programmes and identify training needs. The research will be kept under the Training Council and integrated with it.

During the Eighth Plan period, the Training Council will organize training and seminars in various field such as planning and management, User' Committee organization, skill development and communication to 10499 persons including elected office bearers of Village and District Development Committees government organizations. While conducting these programmes, special attention will be given to motivating the local women to improve their social, economic and educational status. in this regard a total of 9459 women will be provided training in skill development, community development, nutrition, training for women teachers, environment and cleanliness, adult literacy, pre-service training for women employees, and development of local technologies. Besides these population education programme will also be carried out to increase awareness of local people towards population growth.

Regarding the production of Training materials, the *Eighth Plan* will production increase the production collection and distribution of training materials for assisting local development programmes. The target in this regard is to publish 18 books, 7 training manuals, 20 magazines on development themes, 30 news bulletins on local development issues 1 progress report of the Eighth Plan; to organize 5 meetings of experts; conduct 5 research studies; prepare 12 sets of charts and posters; send 15 persons for technical training; establish I offset press, etc.

b. Remote Area Development Programme

The remote area is in a very backward state as compared to other areas due primarily to the country's difficult geographical position and unbalanced regional policy of the past. The 18 districts that were designated as remote areas in 1968 are still in a poor state of development. The primary reason for the low achievement in relation to investment appears to be the implementation of programmes on an ad-hoc basis, rather than on the basis of local needs and potentials by the Remote Area Development Combined and other local organizations in the past. Thus keeping in view the low growth rate, virtual lack of infrastructure and lack of education and other facilities in remote areas it is essential to initiate special efforts to alleviate poverty and backwardness of these areas. For this, the first and foremost requirement is to classify remote areas on a scientific basis. A separate study will be carried out for this purpose.

The Remote Area Development Programme in the Eighth Plan will be directed towards poverty alleviation and construction of social as well as community infra structure. The poverty alleviation programme will aim at increased food production in the food deficit areas through small irrigation scheme promotion of horticulture, vegetable gardening and cash crop production by mobilizing local labor contribution and development of grazing land in the Himalayan region by constructing roads, bridges, etc, In addition, the programme will also be focussed towards supporting income generating activities by developing appropriate technologies on the basis of experiment, construction -of small scale multi-purpose hydro-electric projects and imparting skill-oriented training. The programme for developing local and community infrastructure will include construction of mule tracks, drinking water projects, temples, charitable houses, schools and hostels. For these programs development grant to be allocated to remote areas will be increased, and the spending capacity of the local bodies will be increased. This will be achieved by providing training and technical assistance to the local bodies. Furthermore, the organizational structure of the Remote Area Development committee will be improved and its programmes will be aligned with the District Development Committees for the more objective and effective results. The integrated Rural Development programme will also be extended to remote areas. The programme for the development of monasteries will also be co-ordinated with the Remote Area Development Programme.

Under the Remote Area Development Programme during the Eighth Plan 200 persons will be taken to study tours, 50 overseers will the provided re-orientation training 300 persons will be trained in carpentry and masonry scholarships will be granted for graduate-study of engineering to 5 persons 18 persons will be given an opportunity to participate in workshop seminars on accountancy and 180 Users Committees will be trained. In addition to drinking water will be provided to 30 thousand people, irrigation facilities to 500 hectares of land and roads, bridges and other physical facilities will be provided to 30 thousand people. Furthermore, afforestation will be carried out in 200 hectares of land, and 15 experimental mechanical water mills 2 solar-power stations, 20 small and cottage industries 5 daily and wool processing programmes and 5 fruit preservation projects will be initiated. Regarding monastery development in the Eighth Plan 35 monasteries will be renovated, roof of 14 monasteries will be repaired, 5 seminars' will be organized for Buddhist lamas, a National Institute for Monastery will be constructed and a book on local language will be published.

C. Women's Development Programme

The Women's Development Programme is carried out to improve the socio-economic conditions of the poor and under-privileged women. The local branches of the Women's Development programme working under the Ministry of Local Development have been carrying out the work of organizing women of low-income groups and increasing public awareness through field workers. Under this programme, provision is made to make available collateral-free loans to-women organized in groups for undertaking income generating activities in agriculture, livestock cottage industries, and services business, etc through the commercial-banks. In the fiscal year .1991/92 this programme was implemented in 49 districts benefiting - 20,052 families. At the community level the programme has benefited some 269 thousand people. This programme, however, has not proved to be effective because of high operating cost and its orientation towards to community development rather than income-generating activities.

The program also failed to establish women organizations that are self-sustaining. The Eighth Plan will, therefore, seek to solve these problems in women development in order to make the programmes more effective. The Eighth Plan aims to increase the earning capacity of women and implement programmes that can raise the

status of women, both socially and economically. The non-government organizations will also be encouraged to participate in such women development programmes.

During the Eighth Plan period, the Women Development Program will be expanded to 64 districts. The main objective of this extension programme will be to activate the women who live below the poverty-line in various development works and make them self-dependent by improving their economic condition through the implementation of employment generating activities. The existing deficiency of rural women in skills and other attributes will also be eliminated through training. These programmes to be implemented at the central as well as district levels will be supported by various international agencies such as, UNICEF, Asian Development Bank, UNFPA, IFAD, FINNIDA, USAID, CIDA, GTZ, EEC, FAO etc. The Women's Development Programme at the central level includes programme monitoring, research and feasibility studies, market surveys, development of and extension appropriate technology, seminars, workshops, publication and publicity while the district-level programmes includes income generating, community development and training programmes.

During the Eighth Plan period, a total of 197.8 million rupees will be disbursed as loan for income generating activities to 7,912 women credit groups, from which about 39,560 families are expected to benefit. Skill oriented training will be carried out for 8,102 persons. Regarding community development the Eighth Plan aims to implementing 526 small-scale drinking water projects which will benefit 5260 families, and implementing 564 irrigation projects that are expected to benefit 940 families. Similarly, literacy programme will be conducted in 3,119 centers and these are expected to benefit 93,570 rural women. It is also planned to establish 582 child care centers benefiting about 17,460 children. Furthermore, environment conservation programmes will be implemented in 1011 areas, appropriate technology development programmes in 958 areas, and construction and renovation programme in 357 areas. During the same period, attempts will also be made to organize 3,436 community development groups and encourage small women groups to form inter-groups and organizations respectively. Similarly 13907 people will be given training in health, nutrition, population education and family welfare. About 18,926 people will be divided into groups and given training on different subjects.

For smooth operation of these programmes, close coordination will be maintained among the Ministry of Agriculture, Ministry of Forestry and Environment, Ministry of Finance, Ministry of Education and Culture, Ministry of Industry as well as various private and non-government organizations. The programmes related to Women's Development will be prepared, implemented and supervised according to felt needs of local women. One Women Development officer and a few women assistants will be deputed in each district and programmes and will be smoothly managed and monitored. These programmes, however, will not be operated as parallel programmes but will be co-ordinated and supported by various government and non-government organizations and agencies involved in such activities and the programmes will be implemented by involving local bodies right from the planning stage.

d. Integrated Rural Development Projects

A review assessment of various rural development projects carried out by the National Planning Commission revealed a lack of effective co-ordination among concerned departments, lack of growth in production base owing to failure to give priority to the development of basic infrastructure, inability to benefit the under-privileged groups of people, and lack of sustainability of programmes. In order to correct these drawbacks, the Integrated Rural Development Programmes to be implemented in the Eighth Plan will give priority to those projects which are concerned with production increase, poverty alleviation, and also those which increase public participation, make the users' community self reliant and enhance local capability to undertake development projects. Such programmes will be focussed towards the benefit of backward areas and poor community. The selection of projects will be done according to the priority set by the District Development committee. The project will also seek to increase the participation of non-government organizations in poverty alleviation, and infra-structure related projects as well as institutional development.

During the Plan period 11 Integrated Rural Development Projects will be implemented in 29 districts. These include the MECHI Hill Development Project, Rasuwa-Nuwakot Integrated Rural Development Project, Dhading Integrated Rural Development Project, Gorkha Development Project, Lamjung Integrated Rural Development Project, Gulmi-Arghakhanchi Rural Development Project, Palpa District Integrated Development Project, Rapti Integrated Rural Development Project, Karnali-Bheri Integrated Rural Development project, Karnali Community Development Project and Seti Integrated Rural Development Project.

e. Urban Area Basic services

The Municipalities have been providing basic services like health facilities to poor women and children, and carrying out education, sanitation and skill-oriented programmes in the urban areas for the past few years with assistance from UNICEF. Presently, these programmes are being implemented in the least developed wards of Biratnagar, Lalitpur, Nepalgunj, Pokhara and Dhangadhi municipalities.

During the Eighth Plan period this programme will be extended in additional 10 municipalities of Bhaktapur, Kathmandu, Janakpur, Hatauda Birgunj, Bharatpur, Rajbiraj, Dharan, Tansen and Birendranagar in two phases. Basic services such as primary health services, sewerage, drinking water and sanitation facilities, community building, training in sewing and knitting, etc. will be provided in urban areas with active participation of the people.

f. Programme for Backward and Tribal Communities

The tribal communities living in different areas of the country, particularly in remote areas are being by passed by the development process. None of the previous rural development programmes have reached to these people. For achieving growth with justice it is necessary to improve the socio-economic condition of these deprived people in order to increase their participation in the development process. Special programmes will, therefore, be carried out to improve the living standard of the weaker sections of our society during the Eighth Plan period. Necessary efforts will also be made to develop the language, culture, art and literature of these people. These will help to remove the imbalances emanating from the existing distribution of income and also contribute to national integration.

Among the nomadic tribes in Nepal, the Praja tribe is on the verge of extinction, and hence it is necessary to save this tribe. During the Eighth Plan period various programmes relating to agriculture, education, drinking water, road construction, health posts, etc., will be implemented to raise the economic, social and cultural conditions of this tribe. These programmes will be implemented in various districts through the District Development Committees.

g. Development Grant

1. Provision for Local Development Fund

A feasibility study will be carried out during the *Eighth Plan* period for setting up a separate Local Development Fund to provide financial and material grants to local bodies. This fund to be set up as an autonomous body will receive grants allocated by government for local development as well as grants from donor agencies. The Fund will provide grants or loans to project on the basis of their nature. As the provision grants by HMG depends on government income, the allocation of fund is low when income is low and it is likely that certain construction projects may not get completed, Past experience has shown that if the grants given to local organizations are not tied to their resource mobilization capability, they may not be motivated to mobilize local resources. Therefore, in order to avoid such possible negative effects and encourage local resource mobilization grants to be provided from the Fund will be linked to the local resource mobilization by local bodies. Besides, the resources of the Fund will be made available to local bodies for the development of backward region and poverty pockets.

2. Block Grant

During the Eighth Plan period a block grant of Rs. 2,113.7 million will be provided to local bodies to carry out local development works by mobilizing local resources and manpower. This grant amount will be provided to local bodies through the Ministry of Local Development on the basis of the following criteria;

1. Size of population.
2. Geographical remoteness.
3. Land tax and other revenue to be received by the district.
4. Investment in programmes such as Women Development, Remote Area Development and Integrated Rural Development in the district through the Ministry of Local Development.
5. Internal resources and income source of the district.

3. Commodity Grant (Grant-in-kind)

The Eighth Plan has a target of providing 70 thousand bundles of corrugated sheets to be used as roofing materials by schools in the 75 districts of the Kingdom under the grant-in-kind programme. Additional grants will be given to some municipalities to purchase fire-fighting 4 equipments.

Implementation Arrangements

The local development programmes to be implemented under the Eighth Plan will not be directed from the Center but will be undertaken, from the planning stage onwards, with the support of district line agencies and in co-ordination with the programmes of District Development Committees. In order to strengthen existing Training Centers, a separated Act will be enforced for their autonomy. In addition, local organizations such as users, Committees. Women Self Reliance organizations, private sector enterprises and co-operatives will be encouraged to carry out programmes related to local development by strengthening and developing these organizations.

The local people will be mobilized to the maximum extent possible for effective implementation of local development programmes. The Ministry of Local Development will conduct various training programmes at the local level to promote the institutional capability of local bodies and will also play a co-ordinating role by providing necessary technical and financial support to the local bodies for effective implementation of local development programmes.

Details of-Expenditure

A sum of Rs. 4010 million will be spent through The Ministry of Local Development for the implementation of local development programmes during the Eighth Plan period. The programme-wise budget allocation is as follows:

S.No.	Programe)	Estimated Expenditure (in 1000 Rupees
1.	Training Programmes	99,200
2.	Rote Area Development Programme	181,000
3.	Women Development Programme	376,600
4.	Integrated Rural Development Projects	978,000
5.	Urban.Area Basic Services Programme	26,500
6.	Praja Development Programme	15,000
7.	Development Grant	2,333,700
	Total	4,010,000

Supplies

Introduction

It is essential to maintain regular supply and easy availability of essential consumer goods of daily use and construction materials. It is also necessary to maintain stable prices of such goods. An efficient supply system is of utmost importance in distributing goods from surplus areas to deficit areas and to import in time commodities that are partially produced in the country or totally imported and make them available at the village-level. As the supply of all essential goods may not be possible through government sector, private sector's role is also equally important.

Progress during the Seventh Plan

The Seventh Plan had a target of increasing the sale and distribution of foodgrains from 53,500 metric tons, in the first year of the plan to 62,100 metric tons by the end of plan period. The actual amount sold was 37,000 metric tons in the first year and 33,000 metric tons in the last year. Apart from this, the Nepal Food Corporation maintained stock of foodgrains ranging between 15,000 to 25,000 metric tons for regular supply.

Likewise, as against the target of maintaining stocks of 18,000 metric tons of foodgrains for controlling and stabilizing prices, the actual achievement was 6,000 to 7,000 metric tons in accessible areas. The storage capacity was to be increased to metric tons by creating additional capacity of 85 thousand metric tons to the existing capacity of 8,7000 metric tons, achievement was however, limited to the construction of godowns with 6500 metric tons capacity.

The Nepal Oil Corporation imported 11.33 thousand kilolitres of petroleum products and sold 11.13 thousand kilolitres. The Seventh Plan had a target to construct storage tanks with a total capacity of 8,630 k.l. but the storage capacity of tanks constructed in Pokhara, Biratnagar, Dipayal, and Surkhet did not exceed 3,600 k.l.

During the plan period, the National Trading Limited had a plan to import 2,600 million rupees worth of construction materials and other essential consumer goods, and purchase of 1,000 million rupees worth, of domestically produced industrial goods. These targets, however, could not be realised and NTL imported only 900 million worth of goods and bought 790 million rupees worth of domestic goods.

The Timber Corporation sold a total of 2 million 866 thousand cubic feet of log wood, 3 million 618 thousand cubic feet of timber, and 5 million 947 thousand quintals of fire wood during the plan period.

The Nepal Coal Ltd had a total sale of 286 thousand metric tons of coal.

Progress during the Fiscal Years 1990/91 and 1991/92

During the fiscal year 1990/91 the Nepal Food Corporation had a target to buy 26,806 metric tons of food grains, but the actual quantity bought amounted to only 15,630 tons. The sales target of foodgrains was 40,000 metric tons, but only 33,755 metric tons of foodgrains were sold. Out of the target amount of distributing 14,100 metric tons of food in 38 remote districts only 9 thousand 5 hundred metric tons were distributed. During the first 8 months of the fiscal year 1991/92, 18,000 metric tons of foodgrains were bought and 24,600 metric tons were sold. Since the fiscal year 1990/91 the Nepal Food Corporation has been selling foodgrains at reduced prices by opening fair price shops on co-operative basis. Presently there are 128 such shops.

During the fiscal year 1990/91 the Nepal oil corporation imported 2,28,842 kilolitres of petroleum products out of the target of 2,67,645 kilolitres. The Corporation sold 2,85,934 kilolitres which is in excess of the projected amount of 2,52,545 kilolitres. During the first 8 months of the fiscal year 1991/92, 2, 19, 000 thousand kilolitres of petroleum products were imported and 2,23,000 kilolitres were sold.

During the fiscal year 1990/91 the National Trading Ltd imported 253.1 million rupees worth of construction materials. The import of such materials in the fiscal year 1991/92 was worth Rs. 114.1 million and the purchase of domestically produced goods was worth Rs. 141 million.

During the fiscal year 1990/91 the Timber Corporation sold 5,35,000 cubic feet of log wood, 4,44,000 cubic feet of timber and 6,59,000 quintal of firewood. During the first 8 months of the fiscal year 1991/92, the Corporation sold 4,93,000 cubic feet of log wood, 3,36,000 timber and 2,49,000 quintals of firewood.

The Nepal Coal Ltd sold 38,000 metric tons of Coal in the fiscal year 1990/91 and 56,000 metric tons during the first 8 months of the fiscal year 1991/92.

Existing Problems

The government has not been able to supply required quantity of foodgrains to the remote hilly areas which suffer from food scarcity. It has not been possible also to provide adequate amount of transportation subsidy for

transporting foodgrains. Likewise, Nepal Food Corporation lacks the resources to store foodgrains on a large scale. The lack of capital, inhibited the construction work of fuel storage as per schedule.

Background of the Eighth Plan

The democratic government has a prime responsibility of ensuring adequate and regular supplies of essential consumer goods and development materials. Supply Management and Distribution of such goods can be made more effective if plans are formulated and implemented on the basis of surveys, studies, research and analysis. If policies are formulated keeping in view the basic objective of ensuring adequate and regular supply the concerned organizations will be able to manage the supply system in an effective manner. Such an approach will also increase public confidence in the supply system and its importance in providing to the consumer. The Eighth Plan has prepared its policies and programmes with these aims in view.

Objectives

1. To ensure for regular supply of essential commodities.
2. To stabilize the prices of essential commodities.
3. To maintain a minimum reserve of essential commodities and to provide foodgrain security.
4. To encourage the private sector in supply management with the government acting as a motivator.
5. To make arrangements for the control of black marketing and hoarding of essential commodities.

Policies

1. Research, studies surveys and analysis will be carried out to make supply management more effective.
2. A free market policy will be adopted in the supply management of essential commodities in accessible areas.
3. An open market policy will be adopted in case of commodities which are supplied by the private sector.
4. The private sector will be allowed to import foodgrains, and export them during times of surplus.
5. Minimum support prices will be fixed in time to make supply management of essential commodities more effective and to provide adequate support to farmers.
6. The prices of goods to be distributed by government agencies will be fixed in keeping with open market policy.
7. Study, survey and research will be made on the price trends of essential commodities in order to protect consumer interest.
8. Foodgrains provided to rural areas through transport subsidies will be gradually reduced with an increase in production resulting from the agricultural development programme.
9. Co-operative societies will be encouraged in the sales and distribution of essential commodities.
10. In order to control abnormal increase in the prices of essential commodities from time to time, and stabilize market prices, a policy will be adopted to maintain reserve of foodgrains and other essential consumer goods.
11. The role of corporations concerned with trade and supplies will be clearly defined.
12. Government subsidies to various corporations will be gradually reduced.
13. The supply and distribution system will be regularly monitored at the district, zonal and central levels so as to eliminate the problems of black marketing and artificial shortage.
14. The practice of syndicate-cartel that hampers supply management will be controlled by legal measures.
15. Timely amendments will be made in the laws relating to black market and essential commodities.
16. A programme will be prepared for introducing supply management information system.

Targets and Programmes

1. The following items are listed as essential commodities by the government.

a. Foodgrains

1. Rice (mansuli and Mota)
2. Maize
3. Wheat flour and corn flour
4. Pulses (Black gram and lentil)
5. Sugar and Salt

6. Mustard Oil, Vegetable ghee, oil
- b. Construction/Development materials**
7. Cement
8. Iron rods and corrugated sheets
9. Chemical fertilizers

c. Energy Fuel

10. Kerosene, diesel and petrol

2. Demand Projection

National demand and supply projections of essential commodities will be prepared every year along with the details of domestic production and surplus.

3. Purchase and Sales Programme

- a. A policy will be adopted to encourage and strengthen the participation of the private sector in the purchase and sales of essential commodities.
- b. The policy of government procurement and sales of commodities will be adopted to intervene in the market and supply commodities to remote areas.
- c. If the demand projections show that the locally produced goods is not sufficient to fulfil the demand, the private as well as the government sector will be allowed to import such goods from foreign countries.
- d. A policy of encouraging local purchase will be adopted by fixing market prices keeping in view the transport subsidy in food deficit areas.
- e. If the demand projections show surplus foodgrains, export of this surplus will be permitted on the basis of levy system.

4. Distribution System

- a. The private sector will be encouraged to manage supply and distribution in accordance with the open market policy.
- b. conducive environment will be created for the private sector to supply goods to the Himalayan and remote hill areas, and the role played by government in this respect will be gradually reduced every year.
- c. Foodgrains will be supplied to food deficit areas on the basis of a quota system through the Food Corporation.
- d. In order to make the supply management more effective, -the dealers of the corporation will be mobilized to function as retailers and will be asked to maintain regular supply of commodities.
- e. The supply of foodgrains will be made more effective by opening cooperative fair price shops in the urban market centres
- f. Easy availability of essential commodities will be maintained through consumer co-operatings in rural areas.
- g. The policy of stabilizing prices will be continued to reduce uncontrolled rise in price in the accessible areas.

5. Reserve Programme

Reserve of essential commodities will be maintained to protect and provide relief to the consumers by stabilizing prices and to safeguard against natural disasters. The following considerations will be taken into account while maintaining reserves:

- a. Arrangements will be made to reserve foodgrains and other essential commodities in different places so that these are readily available for supply and distribution.
- b. In order to stabilize market HMG will procure foodgrains and other essential commodities with arrangements to reserve these in godowns belonging to Corporations or private mills.
- c. The private sector will also be encouraged to maintain reserves in accessible areas as well as remote areas to that the programme of maintaining reserves and stabilizing market prices can be implemented more effectively.

Price Control Programme

Normally the prices of the commodities will be allowed to be determined by free market market but in certain circumstances HMG will need to fix the prices of certain essential goods. The prices of such goods, will be fixed

on the basis of survey and research giving prime importance to the interest of producers, consumers and the retailers. The following factors will also be taken into account while fixing prices:

- a. HMG will determine minimum support prices of important foodgrains such as paddy and wheat before planting season in order to protect farmers from the probable fall in prices due to increased production and productivity
- b. The sales price of essential commodities will be fixed on the basis of their cost price.
- c. Since prices of goods are subject to wide variations due to the geographical diversity of the country, HMG will take steps to stabilize prices and also set up a Balance Fund to avoid undue hardships to consumers.
- d. Environment will be created whereby the consumers themselves become aware in discouraging black marketing and hoarding.
- e. since domestic prices are influenced by the variations in prices in the border markets, these prices will also be taken into account in determining the domestic prices.
- f. The prices prevailing in domestic and foreign markets will be periodically reviewed and monitored.

7. Market Development and Extension Programme

In order to maintain regular supply of essential commodities comprehensive and integrated national market will be developed in each district by adopting following programmes:

- a. Necessary support will be provided to concerned bodies to carry out study and analysis of existing markets in the districts and also develop and expand new market areas in order to facilitate and regularise sales and purchase transactions between the producers, distributors and consumers.
- b. Arrangements will be made to supply highly essential commodities through local people by establishing haat bazaars, co-operative and rural markets in remote areas.
- c. The private sector will be encouraged to develop wholesale and retail centres for effective distribution and sales of vegetables in the urban areas.
- d. No restriction will be imposed on the transport of essential goods from one area to another within the country.
- e. The central and district-level bodies will monitor the market trends to eliminate black marketing. For this purpose, Supply Controllers will be stationed in some districts.
- f. The syndicate practice of raising prices artificially to abnormal levels will be controlled through new legal measures.

8. Miscellaneous

- a. Supply Management Information System Programme will be started to make the supply system more effective.
- b. Appropriate periodic monitoring system will be developed to avoid supply shortages.
- c. The Price Data Bank will be operated in a organized manner in order to carry out demand projection, study of market situation, collection of district prices for the purpose of price determination, research and publication.
- d. The industries which produce highly essential commodities will be provided import licence to import raw materials, but this practice will be properly monitored to see whether the raw materials are actually imported and used for production purpose.

9. Corporation-related Programmes

a. Nepal Food Corporation

1. This corporation will remain in the public sector and it will function as the chief government agency for the supply of rice, pulses, oil, maize, sugar and salt.
2. Representatives from the private sector will also be included in the Corporation's Managing Board in order to make its management more effective.
3. The supply system will be made simple and effective by supplying adequate quantities of goods in the market whenever there is unexpected rise in market prices, in accordance with the stabilization policy.
4. The goods specified or purchased by H14G will be stored in godowns as reserve for maintaining stability in market prices.

5. Arrangements will be made to supply foodgrains in under-developed and food deficit districts at competitive prices.
6. Storage facilities will be arranged at suitable places.
7. During the Eighth Plan period 2,65,000 metric tons of foodgrains will be sold 3,10,000 metric tons will be purchased and 78,000 metric tons of foodgrains will be reserved.

b. Nepal oil Corporation

1. Representatives from the private sector will be included in the Managing Board of this Corporation in order to make its management more effective and efficient.
2. The supply of kerosene will not be confined to the accessible areas only but will also be extended to districts in remote areas through dealers and arrangements will be made to maintain reasonable price.
3. The procurement policy of the Corporation will be reviewed.
4. Research will be conducted to find ways of economising the use of energy and fuels.
5. During the Eighth Plan period, the corporation will import 1 million 965 thousand kilo-litres of petroleum products and 28 thousand metric tons of L.P. gas. The Corporation will sell 1 million 965 thousand kilo-litres of petroleum products and 28 thousand metric tons of L.P. gas during the same period. The Corporation will also construct a storage facility of 48,500 kilolitres with the assistance of the Asian Development Bank during the Plan period.

c. National Trading Limited

1. This organization will be gradually privatized for making its management more efficient.
2. The trade policy will be streamlined focussing on limiting imports, and only to specific materials required for development of export of traditional products.
3. In accordance with the policy of market stabilization, scarcity and artificial increase in prices will be controlled by bringing into supply the commodities stored by the organization as reserve.
4. During the Eighth Plan period the NTL will import 2,920 million rupees worth of construction materials and other goods, and purchase and sell 1,200 million rupees worth of domestically produced cement and other commodities.

d. The Timber Corporation of Nepal Ltd

1. This Corporation will be, privatized with a view to improving its efficiency in management as well as trading aspects.
2. Timber and fuel-wood made available by the Forest Department will not be sold at retail level and the sales method will be reviewed.
3. During the Eighth Plan period the Corporation will acquire and sell 15 million 850 thousand cubic feet of wood and 8 million quintal of firewood.

e. Nepal Coal Ltd

1. This organization is targeted for privatization to enhance the performance in management and trade aspects.
2. This organization will import and sell 1 million 21 thousand metric tons of coal during the Eighth Plan period.

Implementation Arrangements

Nepal Oil Corporation, National Trading Limited, Timber Corporation and Nepal Coal Limited will be gradually privatized during the Eighth Plan period in order to enhance the performance of these enterprises. The selling price of essential commodities will be based on their cost. No restrictions will be imposed on the domestic transportation of essential goods from one part of the country to another. Arrangements will be made to maintain buffer stocks of essential commodities like foodgrains. and petroleum products.

Details of Expenditure

During the Eighth Plan period Rs. 700 million is estimated to be spent for projects to be carried out through the Ministry of Supplies.

Miscellaneous

(Planning and Administrative Reforms)

Introduction

The success of any development effort depends on the preparation of development plans, their effective implementation and assessment of progress made. The preparation of a development plan according to its objectives requires the collection of reliable data, their analysis and publication. If the plan and its implementation are faulty, it cannot produce the desired result. It is necessary to emphasize on regular review and assessment to achieve effectiveness in implementation.

The development and use of computer technology have increased dramatically in the world market. The Ministries, Departments and Corporations of HMG as well as the private sector are also making increasing use of computers. In this context, it is necessary to adopt a practical policy on how best we can benefit from the use of this technology. There is also a lack of a feasible policy for institutional development in the area of science and technology.

Administration is an important aspect in the implementation of national plans, and a development administration is a key factor in the development of the country. Expected results can be obtained if the development administration of the country is made efficient, capable and frugal. For this purpose, it is essential to reform our laws, regulations and policies from time to time and upgrade the efficiency of officials to improve the system of administration.

Progress during the Seventh Plan

Planning

Various programmes implemented during the Seventh Plan under the heading 'Planning' are as follows:

One of the objectives was to study the impact of the implementation of the Sixth Plan on the general life of the people. This study was carried out and a report has been published. The concerned institutions also conducted required studies and research for the effective implementation of the national level policies. In order to develop some important sectors that affect the national economy such as agriculture, forestry, irrigation, power, industry, education, health, transport and drinking water, it was aimed to formulate a long term plan or make projections for 15-20 years on the basis of an up-to-date evaluation of the existing plans. Accordingly, a long term plan was formulated in order to fulfil the basic needs of the people. Progress according to the target was recorded in the development of library, achievement evaluation, and review and monitoring of projects. The mid-term evaluation of the implementation of the Seventh Plan was also completed and the report prepared. The Plan has succeeded in upgrading the performance of government officials through training and workshop seminars.

The Government, however, has not been able to study the nature and number of new jobs created through investments under the Sixth Plan in various sectors including agriculture, and the extent of educated unemployment in the country. Similarly, no studies have been carried out on the problems relating to agriculture and their possible solutions, nor on the ways and means and their problems and solutions of increasing revenue from agriculture. The delay in the preparation and publication of the Eight Plan was caused by the directive of the interim government to that effect, following the democratic movement.

Statistics

A high-level National Statistical Council was established during the period to facilitate the work of collecting, processing and analyzing data and avoid duplication in these tasks. As a part of the effort for the development of statistics, the reorganisation of the Central Bureau of Statistics is in the last phase. The-organization in 1989 involved the creation of a new statistical service and the appointment of required personnel.

A manufacturing census was conducted in 1987 and an analytical report has been published. Similarly, several other activities have been carried out including a survey of Cottage and Small Scale Industries, annual survey of manufacturing industries and introduction of the Nepal Standard Industrial Classification, collection and publication of data on public services such-as education, health, drinking water, power and natural disasters and other surveys related to social and economic life of the country. All information on statistics are published regularly, and progress has been made in library administration. In addition to these, an index of manufacturing products was prepared, gross national product was estimated on the basis of statistics on national income-expenditures, and a multi-purpose production survey was implemented. A preparatory work for the survey of agriculture was completed in 1991, and a report on Population Statistics was prepared and published on the basis of the National Population Census 1981 /82. The National Population Census 1991/92 was completed as planned.

Computer

The following progress was made in the implementation of computer programmes during this plan period. The facilities for computer use have increased and efficiency in its use has also improved. Medium-level manpower has been produced through computer training programmes in 16 subject areas. The National Computer Centre together with certain government and non-government organizations has developed and utilised some useful software packages. Attempts were made for the computer manpower to be self-reliant in repair and maintenance of computer hardware. Information on computer technology are publicized through various media and a software package on Devanagari has been developed and brought into use. Further, a Devanagari Word Processing Software package has also come into use.

National Council for Science and Technology

The National Council for Science and Technology has succeeded in carrying out various tasks during the Seventh Plan period. These included policy-based studies on Science and Technology publication of books and reports, studies on manpower development and organization of various seminars and workshops.

Administrative Reforms

The Ministry of General Administration conducted reviews of various development programmes and the regular activities of Ministries. The administrative reforms carried out during the Seventh Plan show the following progress.

The organisation and management study of ten organizations was completed and recommendations were made for implementation. Management consultancy services have been provided to organizations on a regular basis. As regards group division and work description, the postal services and the Nepal statistical service have been formed under the Administrative service. A total of 126 gazetted officers and 5,305 non-gazetted employees were given administrative training under the Civil Servants Training and Research Programme. Fifteen issues of the periodical entitled "Administration" were published, and a policy on the training of civil servants was prepared and implemented in all government training centres. Besides, assessments were made on their effectiveness, and seminars relevant to office heads were conducted.

Laws and regulations on Civil Service are being reformed as found necessary. A directive on the security of government offices was prepared and implemented. The Civil Service records are now being stored in computers.

Progress during the Fiscal Years 1990/91 and 1991/92

Planning

During the two fiscal years of the interim period, the National Planning Commission Secretariat conducted various development works. These included monitoring and evaluation programme, natural and cultural resource conservation, preparation and publication of the Eighth Plan, a study on the impact of the Seventh Plan on the general life of the people decentralization programme, library development, preparation of annual programme, strengthening of the National Planning Commission Secretariat, and programmes for the National Council of Science and Technology. Among these programmes, the one on monitoring and evaluation was carried out during the fiscal year 1990/91 according to set target, but as the concept of priority projects was withdrawn during the fiscal year 1991/92, this plan was not implemented. The programme on natural and cultural resource conservation made progress as planned during the fiscal year 1990/91, but failed to make satisfactory progress during 1991/92 due to various reasons, the chief among which was the failure to establish the proposed National Land Resources and Environment Centre for formulating policies, conducting research and coordinating all conservation activities in the country. Approach to the Eighth Plan has been published and the main text of the Plan is being prepared for publication. The Report on the impact of the Seventh Plan on the general life of the people has been prepared. Village-level studies have been made in 6 districts with a view to bringing about necessary reform in the decentralization programme, and various training programmes have been conducted for gazetted and non-gazetted employees. Similarly, under the library development programme a wide range of books and periodicals have been obtained through contacts and publication-exchange agreements with international agencies and government libraries. The Secretariat has also published a periodical entitled "Development". Apart from this annual programme, reports have been published and distributed. HMC has provided logistic support as per agreement to the National Planning Commission Secretariat strengthening project. A policy based study was conducted on the programmes related to the National Council for Science and Technology and a report to this effect has been published.

Statistics

During the fiscal years in question, various programmes were undertaken. These included publication of statistics and information, library development, development of Social statistics, economic indexes, national

agricultural census, national population census and national accounts development projects, Among these under the project of Data Publication and Library Development, the, library of Central Bureau of Statistics was equipped and various publications relating to data were brought out. Towards social statistics development, collection and publication of various social statistical data were made. Regarding economic indicators programme, indices of agricultural and industrial production were prepared; the results of the manufacturing census were published by editing and refining the data subsequent to the completion of the survey; and the preparatory work for the 1993-94 manufacturing census was completed. Similarly, the regional census of agriculture 1991/92 and the preparatory work for National Agriculture Census were completed. The National Population Census was also conducted within the time specified, and its preliminary results have been published. During 1990/91 and 1991/92 periods, the statistics on national accounts were collected, the gross national product was estimated and the results of the Multi-purpose Production Survey were published.

Computer

Various programmes related to the use of computers were conducted during this period. These included System development and software support, system transfer and implementation, training, maintenance and engineering support, development in research and consultation. The progress being made in these programmes is satisfactory.

National Council for science and Technology (NCST)

During these two years, studies were conducted on technology transfer and a report was prepared on the role of women in the development and use of technology. A long-term plan was also prepared giving priority to research and use of technologies suited to local conditions. Various reports arising from this project have been published.

Administrative Reforms

Following the restoration of democracy in the country, the need for making the administrative machinery service-oriented, impartial and more efficient in keeping with public aspirations has been realised. The newly elected government in giving the highest priority to administrative reforms, formed a high-level Administration Reform commission in 1991/92 under the chairmanship of the Prime Minister. This Commission made exhaustive studies and has presented its suggestions and recommendations on administrative reforms. Within this period, various activities were also carried out on a regular basis. These included studies on administrative organization and management, seminars of the heads of offices, the transfer and promotion of gazetted officers, preparation of a legal provisions for departmental action, scholarships and foreign training.

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Existing Problems

The review of progress made in various development programmes implemented by the National Planning Commission Secretariat has revealed problems related to the lack of adequate funding or under-utilization of funds. These development programmes have also suffered from failure to apportion the amount of funds as demanded. On the other hand, the amount of funds invested cannot be spent as required due to financial regulations. Apart from these problems, the lack of skilled manpower in the National Planning commission Secretariat is another handicap.

The National Statistics Council established to develop and coordinate all statistical activities has been less effective due to the lack of appropriate legal provisions to meet now demands and needs. The various programmes implemented by the Central Bureau of Statistics are being handicapped by various problems including the dependency on foreign aid and the failure to enter into agreements in time with donor agencies. The gross domestic product of the country is still being estimated on the basis of incomplete and unreliable data. The available economic statistics are not upto date and this hinders improvement in the computation of the national income. Further, the problem is compounded by a lack of permanently employed skilled and professional manpower in statistics.

Computer

The failure to achieve desired success in the implementation of programmes conducted by the National Computer Centre is due mainly to the unfavourable conditions prevailed in the country at that time.

The programmes implemented by the National council for Science and Technology usually face many problems due to delays in the sanction of the budget, preparation of reports by research workers and evaluation by experts.

The measures that have been taken to bring administrative reforms have so far proved ineffective. The present slackness in administration has, therefore, failed to provide essential services to the general public. More specifically, the existing problems include the failure to simplify the administrative system, the failure to assess the performance of officials effectively through a system of rewards and punishments, failure to promote or

upgrade professional competence on the basis of long-term needs, the lack of delegation of authority and responsibility to lower level employees and the inability to identify delegated authority due to vague and non-transparent provisions.

Background of the Eighth Plan

An up-to-date knowledge and information of different sectors of the country is a prerequisite for the formulation and successful implementation of the present plan. The formulation of policies and preparation of programmes will depend essentially on the supporting activities such as research, studies, evaluation and other inputs. Besides the development of such infrastructures, it will be necessary to screen projects and to reform the organisational structure of the planning agency.

It is essential to obtain up-to-date and reliable statistics while formulating the development plans and programmes in consonance with the policies and objectives of the national plan. The collection, analysis and publication of reliable statistics are also necessary for the preparation and successful implementation of individual plans. The Eighth Plan has included a programme for the collection and analysis of statistical data in order to complete the programmes that were initiated during the Seventh Plan. It is also necessary to formulate a clear policy on the applications of computer technology in our development efforts. The Eighth Plan has for this purpose proposed various programmes to remove problems such as scarcity of funds for science and technology, indefinite plan of work, and the lack of institutional management in areas of science and technology.

Objectives

Planning

The role of planning in the economy has undergone a constructive change subsequent to the formation of the elected government. In place of the previous practice of strict economic control, there is now an increased reliance on the initiative, efforts, entrepreneurship and creativity of the private and non-government sectors in their participation in productive development activities. The implementation of development works, therefore, being no longer the sole responsibility of the government, requires active involvement of the private and non-government sectors.

The planning process will be further refined and made more scientific keeping in view the development needs of the country

The aim will be to create favourable conditions for the implementation of the plan, and to undertake periodic monitoring and evaluation for its effective implementation,

statistics

It is essential that a plan and its requisite policies are prepared on the basis of reliable and up to date statistics. The process of collection, verification and analysis of such data will be made as practical and scientific as possible. It will also be necessary to maintain co-ordination between the collector of data and the users, and organize information exchange programme more effective in order to support policy-making decisions.

computer

The objective of the Plan will be to develop the use of computer technology in areas where this is necessary by maintaining close co-ordination between the government and non-government sectors.

science and Technology

The main objectives in this area will be to increase investment in the science and technology sector, to increase physical facilities and create suitable conditions, to conduct training programmes, studies and research, and to increase the uses of science and technology through institutional development.

Administrative Reform

The main objectives will be to strengthen the development administration for efficient implementation of development programmes by making it more prestigious and reliable and to make the administration more production and development oriented by enhancing the capability and effectiveness of administrative units rather than their number. Similarly, it is also aimed at enhancing the management capabilities and augmenting the quality of services by mobilising the private sector and NGOs for better services and facilities to the general public. The revenue administration training will be conducted in order to increase the capability and skill of employees working in revenue and accounts services.

Policies

Planning

Studies and research on various areas will be carried out as inputs to the preparation of the periodic plans. The results of such research will continue to be used.

The methodology used to prepare the plan will be made more practical and scientific. A policy will be adopted to reform present practices related to classification of capital, current and other expenditures.

The staff engaged in preparing the plan will be trained so that they are able to use new methods and techniques.

Statistics

The policies will involve making the National Council of Statistics more effective, establishing a scientific and efficient central data bank, developing statistical service (as a part of the Nepal Civil Service) bringing about reforms in the organizational structure of the Central Bureau of Statistics, and developing the important agencies involved in economic and social statistics as focal points for maintaining coordination among various bodies/agencies involved in statistical activities.

Science and Technology

Several measures will be undertaken to develop science and technology in the country. These will include increase in physical facilities, manpower development, import and use of suitable technology from other countries, and development of traditional technology and skills.

Computer

A National Computer Training Centre will be established to develop computer-skilled manpower, along with development of software and research activities on various aspects of computer application. As computer technology is a national need, its services will be expanded gradually on a regional basis so as to increase public awareness of its important potentials. A National Information Documentation and Network Services will be developed to collect important data and information from various computer centres operating in the country and to make them available on exchange basis.

Administrative Reform

Policies will be formulated to implement the recommendations proposed by the Administrative Reform commission for a more effective re-organization of the administrative system in the country. (The Policies on Administrative Reforms are included in the principal National Policies)

By conducting studies and research on revenue and financial administration, the revenue service will be strengthened.

Programmes

Planning

Mid-Term Evaluation of the Eight Plan:

The mid-term review and evaluation of the Eighth Plan will be carried out to assess the progress made and to be familiar with the nature of the problems encountered in the implementation of the Plan.

Studies for the Preparation of National-Level Policies and their Effective Implementation

The concerned Ministries, organizations and the National Planning Commission will conduct necessary studies for the preparation of national-level policies and their effective implementation.

Long-term Plan

A long-term public investment Plan will be prepared on the basis of studies and research related to financial and developmental aspects. Such a Plan is expected to give a proper direction to the development of economic policies.

Library

The library and documentation facilities at the National Planning Commission Secretariat will be developed for planning and research purposes.

Strengthening National Planning Commission Secretariat

Certain necessary measures will be taken to strengthen of the Planning Commission Secretariat so that it can contribute more fully to the preparation, evaluation and analysis of development plans.

Project Screening

An appropriate projects screening mechanism has not yet been developed at the National Planning Commission Secretariat and in line ministries owing to the lack of basic information such as the rate of return, sources of financing and so forth. The Secretariat and the Ministries for this reason need to be reorganized and developed

so that they are able to select and implement projects that can have direct impact on economic growth. Such project selection methodology will be gradually designed and pursued on an institutional basis.

Monitoring and Evaluation

Necessary programmes will be implemented to strengthen monitoring and evaluation system, which will ensure successful implementation of development programmes.

Poverty Alleviation

The Eighth Plan will give the highest priority to fulfilling the objective of poverty alleviation in the country. The various programmes to be undertaken for this purpose are outlined in the related section of the Plan.

Long-term Plan

During this Plan period, a long-term plan on agriculture, energy, transport and other areas will be prepared and implemented. The details of this plan are included under the relevant section.

Natural and Cultural Resource Conservation

A national policy will be prepared and various programmes will be conducted to protect the natural and cultural heritage of the country through effective control measures against environmental pollution.

Council for science and Technology

Various measures will be undertaken in science and technology. These measures will include increased investments on projects that create employment opportunities and higher productivity, research and technology transfer, increase in physical facilities, information dissemination, provision of support systems and division of work as required, a greater sense of responsibility, establishment of agencies for co-ordination purposes and selection of programmes most suited to local and national needs.

Statistics

The Central Bureau of Statistics will implement the following programmes:

Publication of Statistics and Library Development

The information on statistics will be disseminated to both domestic and foreign organizations as required, and relevant reforms will be introduced in library management.

Improvement in Social Statistics

Analytical studies on statistics relating to various social aspects will be published, and district-level social profiles as well as the indicators on the social status of women will be prepared.

Economic Indices

Various economic indices relating to production and market prices will be published.

Improvement in National Accounts

The estimates of national accounts and the methods of working out these estimates will be improved. These estimates are obviously necessary for the preparation and evaluation of the National Plan.

National Population Census 1991/92, Population Analysis and Demographic Sample Survey

The statistics obtained from the Population Census will be analyzed; major changes in the population will be studied, population projections will be made, and surveys will be conducted to update vital statistics such as the birth and death rates and migration.

National Agricultural Census

Reliable statistics required for the formulation of agricultural plans will be made available, and the results of the agricultural census will be published.

Industrial Census/Survey of Small and Large Industries

An industrial census will be conducted to study the conditions and the productivity of various industrial plants. The results of such analysis will be published. Plans have also been made to prepare industrial indicators and to carry out surveys of small and large industrial plants following the main census.

Development of Household Survey

The plan proposes to conduct regular household surveys to obtain up to date data on the social and economic field, as well as to improve on survey techniques.

Vital Registration Programme

The plan envisages a number of **programmes to collect vital** statistics on births and deaths, and migration pattern on a regular basis.

Computer

The following programmes on computer technology will be implemented during the Eighth Plan period.

Teaching and Training

A Computer Training Centre will be established to prepare skill manpower in computer technology. Such training will now be extended to the private sector. Necessary arrangements will be made during this plan period for the private sector and educational institutions to implement training programmes.

Software Development and Research

A suitable software programme will be developed with contributions from various computer agencies, and marketing facilities will be set up for this purpose. Among the various aspects of computer technology, the use of the Devnagari script for processing of information will be given priority for special research. Further, necessary action will be taken to export suitable software packages.

Computer Repair and Maintenance

The self-reliance achieved in certain aspects of computer repair work will be maintained, and programmes will also be implemented to prepare more specialists for the continuity of this achievement. The organisations under the private sector will also be encouraged to contribute to the development of this service.

Extension of computer Services

The Eighth Plan proposes to establish branch offices of the National Computer Centre at suitable places or where necessary in order to provide essential computer services and to extend the use of computer technology in the country.

Development of National Information Bank and Network System

A National Information Centre will be established to develop proper systems of storage, processing and regular dissemination of important information on computer technology. A national information network will also be developed with the affiliation of government and semi-government computer organisations. In this task, the National Computer Centre will function as the chief coordinating agency with its computer system acting as the centre of the national computer network.

Administrative Reform

Administrative Reform and Reform in civil service

This reform programme will be implemented during the Eighth Plan to impart greater sense of responsibility in civil servants and to enhance efficiency in the administrative system. Under this

programme, the job descriptions of existing civil service posts will be prepared, professional groups will be set up on the basis of work specialisation, and standards of work and responsibility will be established according to the status and nature of duties. In addition to these, the recommendations made by the Administrative Reform Commission will be implemented with periodic assessments/and follow up.

Organisation and Management

Measures will be taken to reform the organisations and the management systems of HMG according to the recommendations of the Administrative Reform Commission. The Eighth Plan proposes to study the structure of 14 organisations, to conduct 23 monitoring studies, and to prepare office manuals and programmes.

Training, Research, coordination and Evaluation

This programme is being introduced to make administrative training more effective. During the Eighth Plan, it is proposed to train 25 groups of district-level officers, conduct seminars on training coordination for 5 groups, and publish 15 issues of the journal "Administration".

Strengthening of the Public service Commission

Reform in Examination and Evaluation Techniques:

Appropriate reforms will be made in the methods of assessing the candidates for selection and recruitment.

Curriculum Reform

The curriculum will be improved and updated according to changing needs. The documentation section of its library will also be strengthened.

Building Construction:

The Public Service commission proposes to construct its own examination building as it has been facing numerous problems in having to conduct examinations in various school buildings on rent. The Commission will also take necessary steps to have a Central Regional Directorate building constructed. Arrangements will be made to acquire land and other physical resources for constructing the Directorate building.

Administrative Training

It is self-evident that the employees will be able to increase their work efficiency if they can be given in-service and refresher trainings as required. The Administrative staff College was established to provide necessary training for the higher and mid-level employees.

During the Eighth Plan, the Administrative Staff College will implement various training programmes including in-service training; training for gazetted first and second class officers, employees of government as well as non-government organisations.

The Plan aims to organize 10 seminars for HMG officials and the heads of government departments. Besides, studies on the current administrative problems, certain services such as consultancy and trainer-trainee interaction will be offered.

The Revenue Administrative Training Centre will conduct various training programmes to improve the revenue service by mobilising its internal resources, to upgrade the efficiency of staff and to provide other necessary services.

Implementation Arrangements

The secretariat of the National Planning Commission will prepare and implement various programmes outlined in the Eighth Plan. These will include programmes related to planning, statistics, and computers as specified in the procedures of implementation. The programmes relating to statistics will be implemented by the Central Bureau of Statistics and the various units under it. The programmes on computers will be implemented by the National Computer Centre. The programme related to vital statistics will be carried out by the Home Ministry. All programmes on Science and Technology will be implemented by the National Council for Science and Technology which functions as a government organization under the National Planning Commission Secretariat.'

The administrative reform programmes will be implemented by the Ministry of General Administration, the Public service commission and the Administrative Staff College. The programmes on revenue administration training will be carried out by the Centre for Revenue Administrative Training.

Details of Expenditure

It is estimated that a total of 133 million rupees will be spent in 1991/92 at the constant price. This amount will be used to implement various programmes specified under the project heads of the Eighth Plan. Out of this total amount, the sum of 56 million rupees is expected to be spent for the National Planning Commission Secretariat and the National Council for Science and Technology. A total of some 77 million rupees is expected to be spent in implementing the programmes on statistics. This amount includes the budgets assigned to various area offices at the regional and district levels operating under the National Planning Commission Secretariat.

The expenditures required by the National Computer Centre will be met from its own revenue sources. The government will also take necessary steps to obtain support and assistance from foreign countries to help develop programmes and projects on computer technology.

During this Plan period, it is estimated that a sum of 170 million rupees will be spent in fulfilling the aims and policies of administrative reforms. Thus the total amount to be spent under the heading "The Plan and Administrative Reform" during the Eighth Plan is expected to be 303 million rupees.

Poverty Alleviation

Background

Poverty is a widespread phenomenon in Nepal. Though there is a lack of dependable data as regards the magnitude of poverty it is estimated that 9 million people (i.e. 49 percent of Nepal's total population) live in absolute poverty. The country's development is obviously impossible without the participation of such a huge section of population in the development process. Hence, special efforts will, therefore, be made during the Eighth Plan for poverty alleviation. Since the attempts made in the past for poverty alleviation were faulty in principle and weak in implementation, the general public could not benefit from them as expected. Instead, different materials and services provided by the government as grants or at subsidized rates were utilized either by the relatively well off ones or by the comparatively better-off group among the poor. The situation was such that the households living in the condition of abject poverty and backwardness, both socially and economically, did not either know at all about the services delivered by the government or they were not able to utilize such services even if they knew about them. For this reason, the poverty alleviation programmes to be undertaken in the Eighth Plan will be so formulated and implemented that the relatively well-to-do families may not grab these benefits and the real poor ones will benefit directly or indirectly. Since, the poverty alleviation task is of multi-.. in nature; it is essential for the programmes of all sectors to make a concerted effort to alleviate poverty. Hence, all the sectoral programmes will be directed towards poverty alleviation.

Identification of the Actual Poor

It is essential to identify the backward rural areas and the people living below absolute poverty line before formulating and implementing poverty alleviation programme. The criteria used in the past under the rural development programme to identify poor families were faulty therefore, the target group could not benefit effectively from the programme. The poverty level of people living in rural community can be easily ascertained on the basis of their housing, food, cloths and other living conditions. However, such a procedure would be rather ad- hoc and inadequate to specify the level of poverty on the basis of specific parameters which can reflect the real situation explicitly. In the past, different organizations employed different parameters to assess the level of poverty; so there was no uniformity in them and no accurate assessment could be made available regarding the extent of poverty in the country. In the Eighth Plan, simple parameters will be devised to ascertain the real situation of poverty. Accordingly, the poor people living in the areas where the poverty alleviation programme is to be introduced will be identified and effective programs will be launched for social and economic upliftment of. such families. Decision will also be made regarding the region where such 'programmes ought to reach.

Policy Arrangements

The following policies will be adopted to alleviate poverty during the Eighth Plan period:

- (a) To develop a simple procedure for identification of undeveloped areas and poor families and use it uniformly across all sectoral programmes.
- (b) To carry out self-targeted and targeted programmes for poor people.
- (c) To increase the access of the poor to the means of production.
- (d) To make arrangements for awarding contracts of technically simple construction works to groups of poor people.
- (e) To make legal provisions for elimination of social evils and to create public awareness in this regard.
- (f) To make effective legal provisions against exploitation of the poor and the helpless.
- (g) To initiate dialogue for negotiations with foreign governments/ agencies for the employment of unskilled and skilled Nepalese manpower seeking employment in foreign countries.
- (h) To arrange for creating employment opportunities in non-agricultural sector through food security programmes.
- (i) To take environmental balance into consideration while designing a programme.
- (j) To make institutional arrangements for extending necessary support to the task of poverty alleviation.

Programme

The people in general, irrespective of the region they live in, can be benefitted from the investment made by the government in building various social and physical infrastructures and in developing agriculture, industry and other economic activities. However, such investment may not reach those nooks and corners of the Kingdom which are inhabited by the poorest of the poor. For the purpose, it is deemed necessary to envisage a special programme for the socio - economic upliftment of those places and the people living there. Programmes such as

production credit, training, provision of employment, children's education, nutrition for mothers and babies, etc. will be introduced for poor families on individual or collective basis. Emphasis will be laid on the construction of assets community like *road, bridge, school, drinking water, irrigation and health post which would, directly or indirectly, benefit poor households. The following programmes and targets have been set for the improving the socioeconomic condition of the poor during the Eighth Plan:

A. To Develop Physical Infrastructure

Since poverty is generally rampant in backward areas, arrangements will be made for the construction of physical infrastructures such as roads, irrigation projects etc. for the development of such areas. Such labour-intensive construction works will generate employments for the poor.

Programmes such as food-for-work will be utilized for the creation of these physical infrastructures. Arrangements of labour-certificate will also be made under this programme. Infrastructure development projects will be executed by the government or non-government agencies and arrangements will be made to deposit some portion of the remuneration earned by the participating labourers into a nearby financial institutions in order to enable the workers to draw loans from financial institutions against the labour certificate issued to them.

B. To Increase the Poor's Access to Means of Production

The community and natural resources and assets available in the various parts of Nepal but not yet adequately harnessed will be studied and evaluated and made available to the poor households free or on lease. These resources include forest land with thin crown cover, waste land, pond, lake and river bank etc. The surplus land above the land ceiling will also be acquired and used for settling the poor in a systematic manner on the basis of social justice.

C. Education and Training

Education and training will be another important component of poverty alleviation programme. Other sub-components under this will be functional nonformal education, adult literacy programmes, social awareness development training, skill development training for the successful implementation of income generating activities, entrepreneurship development training, excursion tours of successful programme sites etc. Follow-up arrangements of the training will be ensured by arranging necessary assistance, support and supervision mechanism.

D. Social communication Programme

These programmes will be launched in order to make the poor people fully aware of different activities such as those of social, economic or legal nature and appropriate technology that have direct impact on them and raise their level of awareness. Under this programme, expansion of programme-wise assistance to communication facilities, formation of mobile communications teams, establishment of community centres, use of video-technology and different other means and technologies of communications will be brought into practice.

E. Population Programmes

Since it has been observed that the number of poor grows at a faster rate under a higher rate of population growth, it has been imperative to adopt effective measures to check population growth for the success of poverty alleviation programmes.

Activities under the population programme for the poor mainly include awareness raising programme about family planning use of contraceptives, control of birth rate, maternal-child health care, child care and nutrition 'and increased supply of means of birth control:

F. Employment Generation

As it is imperative to have a healthy body in order to qualify for employment, efforts for food and improved health of the poor will be taken as a precondition. Employment for the poor will be generated through intensive farming programmes, increased construction activities, establishment of refinery and industrial districts and promotion of employment opportunities in other nonagriculture based activities. Employment opportunities for the poor and landless families will increase to a marked extent due to their access to land and other public and community assets.

The simplification of process of obtaining credit for employment generating activities and provision of increased fund for the credit programme may also bring about an increase in the income generating employment opportunities.

G. Food Security Programme

Food security measures will be adopted in order to involve the poor in relatively more market-oriented activities for increasing their income. These measures include expansion of food-for-work programme, effort for increased

integration of hill and Terai markets, arrangements- for regional food storage, developing awareness for change in food habits, diversification in food consumption, control of foodgrain leakage and improvement in the system of foodgrain procurement and distribution.

H. Development of Technology for the Poor

Efforts will be made for developing, testing and extending divisible and appropriate medium-scale technology suited to the capacity of the poor, in particular, with the allocation of larger research grants.

I. Labour Export

Labour may be exported in two ways: first through the increase in the export of the labour-based products and secondly by direct export of workers thus benefiting them from the higher rate of wages existing in the countries importing labour.

J. special Programmes for Women

Whereas the above gender discriminatory programmes may benefit the women in different ways, other special programmes for women will also be launched. Activities under these programmes will include enactment of effective law against dowry system, development of time-saving technologies for women-run activities, health and nutrition programmes for lactatory mothers, income generating activities for the upliftment of women in the family as well as the society. Laws against the exploitation of child labour will be enacted and enforced.

K. Special Programmes for Backward Ethnic Tribes

It has been found that various tribes and aborigines of the hills and the Terai have not been effectively benefitted from the general development programmes, Hence, appropriate programmes will be developed and implemented for their social and economic upliftment.

Increasing the Effectiveness of Current Programmes

The poverty alleviation programmes currently in operation will continue as they are and higher efficiency will be developed in their working style. Under this organizational structure of programmes such as Production Credit for Rural Women, Remote Area Development Programme, Integrated Rural Development projects etc., will be improved and focused towards the poor. The targets, of these programmes have already been mentioned in the chapter on Local Development. Organizational functions such as organizing the poor in groups so far being carried out by these programmes will gradually be handed over to the NGOs and individuals assigned to National Development Service (NDS) programme, thus confining the task of these programmes only to service delivery and enhancing their efficiency.

Institutional Arrangement

To carry out the aforesaid programmes for poverty alleviation effectively, necessary institutions would be set up.

A. Establishment of a Trust-Fund

in connection with the development of necessary institutional arrangements for the socio-economic upliftment of the backward areas and the identified poor, a feasibility study for the establishment of an autonomous Trust Fund will be carried out during the Eighth Plan and the Fund will be established accordingly. The Fund from within its resources will make available grants and loans for the institutional development of NGOs, private sector, consumers'/users' committees and farmers' groups and for the package programmes of poverty alleviation to be executed by these organizations/agencies. Likewise, the Fund will provide grants and loans for initiating poverty alleviation programmes in place and areas where sectoral programmes to be implemented by different government agencies are felt inadequate.

Within the institutional arrangements, the farmers' groups shall be the principal organizations. These groups may organize themselves as intergroup units, small-scale cooperatives, full scale cooperatives or further higher level institutions. These groups or organizations may include such units as specialized contractors's groups, production units, marketing groups, commodity organizations, industrial units, services units and any other groups engaged in different activities. An atmosphere conducive to their becoming self-sufficient will be created and necessary unity among these groups will be ensured. Training has an important place in this regard.

In course of the programme implementation, the Trust will develop necessary planning-related indices to be included in its future policies and programmes. Similarly, provisions will also be made for the formulation, execution, monitoring and evaluation of the programme.

During the Eighth Plan period, a pilot programme will be carried out by the Trust Fund. Accordingly, model village programmes will be conducted at 10 places one in the hills and one in the Terai of each development region. Under this programme, the poor farmers will be organized into groups and arrangements will be made so as to ensure retail services in the locality through the intergroup units; and service agencies in such areas will

only deliver wholesale services. It is estimated that it will, at least, take 5 years to develop such institutional arrangements in a region.

B. Poverty Alleviation Credit Programmes

While making the Small Farmers' Development Programme being implemented by the Agricultural Development Bank for the socioeconomic upliftment of small farmers more effective by developing maximum number of self-motivated organizations thus improving the lot of member poor families through these organizations, the programme (SFDP) will also be extended to new poverty stricken backward areas. In the same vein, similar approach will be adopted with regard to "**Production Credit for Rural Womens**" programme.

C. Revival of the National Development Service Programme

A feasibility study will be undertaken to align the National Development Service Programme with poverty alleviation by bringing about necessary changes in the programme conducted by Tribhuvan University earlier.

D. Monitoring and Evaluation

Monitoring and evaluation of procedural details and implementation of programmes designed for poverty alleviation will be done at 3 different levels. At the first level, it will be carried out in accordance with the procedure fixed by the National Planning Commission for the monitoring and evaluation of sectoral programmes. At the second level, it will be carried

Out by the Monitoring Unit within the Trust Fund in proper coordination with the district development boards. This unit will monitor and evaluate all programmes aided by the Fund. At the third level there will be a Poverty Monitoring Unit established under the Rural Development and Decentralization Division of the National Planning Commission. The functions of this unit will be as follows:

1. To conduct basic/baseline surveys and determine the magnitude and level of poverty.
2. To develop necessary planning indices relating to poverty alleviation policies and programmes.
3. To determine the number of those crossing the poverty line through various poverty alleviation programmes.
4. To identify disadvantaged/backward areas having a high number of poor population.

Targets and Programmes

The magnitude of poverty will remain confined to conjecture unless the poor are really identified. Recently, the number of the poor in Nepal is estimated to be approximately 9 million, one-third of them being ultra-poor. Even more alarming is the future outlook of poverty which is to grow further in magnitude. According to recent estimation, the annual increase in the number of poor households has been 2.2 percent. If the present trend continues, the number of the poor will reach 10.2 million, i.e. an increase of 1.2 million by the end of Eighth Plan.

Considerable efforts should be made even to maintain the absolute number of poor at the present level. Therefore, the poverty alleviation programme will have to make a quantum leap as regards the process and quality of target activities. This requires collective efforts of all sectors/quarters for poverty alleviation. The Eighth Plan has a goal of promoting approximately 1.4 million poor people to non-poor status through different programmes. In the event of this goal being achieved, there will be about 8.7 million (42 percent of the population) poor people in the country after the conclusion of the plan period.

Population

Introduction

There has been a rapid population growth in Nepal. It has increased by 3.5 million in the inter-census period (1971-1981) and is estimated to have increased by the same rate in 1981-1991. Thus, Nepal's population has reached 18.5 million according to the preliminary findings of 1991 census report, whereas it had been just 10 million 20 years ago. The annual average growth rate of Nepal's population, which had been 2.66 percent in the decade (1971-81), has come down to 2.08 percent in the decade (1981-1991).

In terms of geographical regions, the proportion of population has relatively decreased from 1981 to 1991 in the mountains as well as the hills (Table 1), The distribution of Nepal's population has been found to be: 7.82 percent in the mountains, 45.56 percent in the hills and 46.62 percent in the Tarai. The district with the highest population is Morang (676,417), while the one with lowest population is Manang (5,369).

Table-1
Geographical Distribution and Annual Growth Rate of Population

Geographical region	Total Area	Population			Annual GrowthRate	
		1971	1981	1991	1971/81	1981/91
Mountain	51,817	1,138,610	1,302,896	1,444,481	1.35	1.04
Hills	61,345	6,071,407	7,163,115	8,511,309	1.66	1.62
Terai	34,019	4,345,966	6,556,828	8,606,291	4.20	2.76
Total:	147,181	11,555,983	15,022,839	18,462,081	2.66	2.08

1. According to the 1991 census, the total population of 33 municipalities reached 1,682,274 which means that 9.11 percent of Nepal's total population live in urban areas.

Past Efforts and Present Situation

in compliance with the national goal of enhancing the standard of living of the common people, it is necessary to give priority to population aspects in periodic national plan. in Nepal too, population programmes had been launched since the Third Plan period. Even during the Fourth and Fifth Plan periods efforts had been made to control population; however, no attempt was found to be underway to integrate all relevant aspects of the population and then frame a national population policy until 1982. The national population policy incorporating short-term, mid-term and long-term population-related objectives on the recommendation of the then National Population commission reconstituted in 1982 was approved by HMG. One of the major objectives of this policy was to bring down the total fertility rate to 2.5 and-to limit the total population to 20.6 million by 2000 A. D.

As a result of these initiatives in the population control activities, there has been some achievement in this sector. The crude birth rate has roughly declined from 44.0 to 37.4 during the period of 1981-1991. Similarly, during the same period the total fertility rate has declined from 6.3 to 5.8. Likewise, there has been considerable decline in mortality. In 1981-91 the crude death rate declined from 18.5 to 13.3, while the infant mortality rate reduced from 123 to 102. As a result of the decline in death rate, the average life expectancy has increased to 54.4 years.

Population growth in Nepal has been relatively much high. If this rate continues, it is likely to reach 37 million within the period of next 34 years. It is obvious from this that the goal to limit Nepal's population to 26.6 millions by 2000 A.D. can not be materialized. Such growth in population is attributed to the fact that there has been a decline in the crude death rate, but birth rate has not declined in the same proportion. There still prevail high infant mortality rate, financial importance of children in a household, low status of women in society, stronger desire for male children, illiteracy, ignorance and other similar social evils as motivating factors for larger families, especially in the rural community. Besides, no substantial achievement has been found to have

been made in this sector owing to the slackness in implementing the long-term national population policy framed in 1982. Only 20 percent of the 91 resolutions made for implementing this policy have been found enforced.

Population growth in Nepal has not coincided with similar growth in food production nor have there been introduced any major alterations in the nation's economic structure. Consequently, there has been growing tendency to cultivate marginal land and steep hilly terrain. It has adverse impact on forest and environment which has, in turn, affected agricultural production. Similarly, the pressure of rapid population growth in urban areas has increased excessive pressure on the physical infrastructures (e.g. road, health, drinking water, transport, etc.) existing there. The unchecked population growth has given rise to problems like malnutrition, high infant mortality rate, and growing unemployment in rural poor families. Their family size is larger than the national average size owing to high birth rate and there are more children than earning members in poor families. Unless the condition of these families is improved their future generations are bound to be unskilled, illiterate and debilitated labourers in large number.

Population growth is, on the one hand, high in Nepal while, on the other, its spatial distribution is in a-worsening situation (see Table 1) . owing to the lack of imbalance between the government's investment and population distribution, concentration of investment in limited areas and other factors, the problem of internal migration, urbanization and the landless has become further complicated. The high fertility rate in the past has resulted in gradual increase in the proportion of children in the total population. Now children of 0-14 year group constitute nearly 40 percent of the total population and girls under 14 years of age figure 50 percent more than the total number of women of reproductive age. When these girls reach their reproductive age, population growth rate will still increase.

To improve the high rate of poverty and its wide distribution and worsening situation, it is essential in the national interest to regulate the population growth rate in a desirable way. In rural societies large families are still considered very useful. Children even before reaching 5 years of age are engaged in fetching wood, carrying water, grazing cattle, and collecting fodder. According to the statistics available, girls of 10-14 year group work for 3.30 hours a day at their households. It is, therefore, extremely difficult, if not impossible, to regulate population growth rate by creating motivation for small families unless fuel, drinking water and education are provided in rural societies. on the other side, it is but natural for people in general to be attracted towards large families in view of the existing facts like growing unemployment, high infant mortality rate and economic and other safeguards received from children during old age. In this perspective, it is essential to focus on equitable distribution of national production by increasing it in order to regulate population growth rate through establishment of harmony between the national goals and individual and family interest. To achieve it, it is necessary to integrate the programmes related to women development, drinking water, health services, energy development, population education and old age security from policy-making level to implementation level. Population problem is a multi-faceted one; hence, it needs to be sorted out by taking into account the inter-relationship among population, land use policy, housing and other factors. Accordingly, it seems reasonable to classify the trends and challenges prevailing in the sector of Nepalese population into the following two aspects:

- To regularize population growth rate
- To solve the problems arising out of the effect of age composition created by the high fertility rate in the past and its other possible effects in areas like migration, environment and urbanization.

These factors have to be borne in mind in formulating the population policy under the Eighth Plan.

Objective

The objective of the national population policy is to establish adequate balance between population growth and socio-economic development and environment and thereby help Nepalese people fulfil their basic human needs.

Targets

The long-term goal of the national population policy is to create the environment conducive to the formation of small families through socio-economic incentives and thereby restrict each couple's desire for two children only. This goal will be achieved in various phases. In the Eighth Plan the targets of the national population programme will be as follows:

- i. To reduce the total fertility rate from 5.9 to 4.5.
- ii. To increase the present life expectancy from 54.4 to 61 years.
- iii. To reduce the existing infant mortality rate from existing 102 to 80 per thousand.
- iv. To reduce the child mortality rate under 5 years of age from 165 to 130 per thousand.
- v. To reduce the existing maternal mortality rate from 850 to 720 per 100,000.

- vi. To regularise internal migration.

Policies

To achieve these targets the following policies will be adopted:

- a. To create congenial socio-economic atmosphere for small families with only two children and then to motivate the couples for small families by implementing various programmes for promoting general people's living standard.
- b. To keep on developing the programmes related to women's development, adult literacy and education in order to, promote women's socio-economic status.
- c. To integrate the family planning programmes with the primary health programme and then implement it.
- d. To expand NGOs and other private agencies to make the family planning services available up to the grassroot level in an effective manner.
- e. To develop skilled manpower through training and extension programmes.

Strategy

For the effective implementation of the policies listed above the following strategy will be adopted:

Demand Generation

To control population growth rate, it is very essential to create a socio-economic situation for motivating reproductive couples towards maintaining small-sized families. For this purpose the following strategies will be adopted:

- 1. As women's socio-economic level is intimately related to fertility rate, it is essential to offer higher status to women in a society. Hence, the programmes related to their education, skill development and increase of employment opportunities will be carried with greater emphasis for improving their status.
- 2. To develop a system mechanism for the implementation of programmes incorporating population and family planning with the programmes like rural development, growth of food production, forest development and industrial development.
- 3. The population and family planning education will be integrated with the formal and informal education and widely carried out. The information related to the family planning means will also be incorporated with educational programmes, esp. adult literacy, and secondary and vocational education.
- 4. To popularize the two-child concept through creating people's consciousness about various facets of population, economic progress and environment, intensive population-communication drive will be launched by adopting multi-media method through press, radio, television and all other interpersonal communication media.
- 5. The population information centres will be consolidated and extended to collect, refine and disseminate the details relating to the national and international population facts and figures.
- 6. In view of the adverse impact of unchecked population growth on environment, emphasis will be laid on effective implementation of population programme in the districts with worsening environmental situation.

Service Delivery

The fertility rate cannot decline unless family planning devices are made easily available to general people. Now nearly 80 percent of the nation's population are informed about these devices; however, only 20 percent of them have been found using them. Most of the couples who use the family planning devices are rather older in age and have already got 3 or 4 children. Hence, it is essential to increase the use of these devices in young couples with fewer children. In order to run effective family planning service delivery system, the following strategies will be adopted:

- 1. The family planning programme will be integrated with the family welfare and primary health programmes and the family planning and maternal and child welfare services (viz, vaccination, rehydration treatment, delivery services, etc.) will be made available on regular basis through hospitals, health centres, health posts and mobile medical camps.
- 2. The family planning and maternal and child welfare facilities will be made easy and accessible and the system for the availability of the devices required by users will be developed.
- 3. The service delivery system of the family planning devices will be strengthened and made effective.

Population Management

The policies listed above are aimed to control the population growth rate. Children outnumber others in Nepal's present population; hence, even if the population growth rate is controlled, population size will still continue to grow in the next three decades. This growth will result in rapid increase in the population of urban areas which will, in turn, exert much pressure on the physical infrastructures existing there. In addition, the problem of migration will get more complicated. Taking these facts into consideration, the following strategies will be adopted in the sphere of population management:

1. Emphasis will be laid on adequate development of the mountain and hill regions with a view to resisting the pressure of unrestricted migration in the nation's capital, large towns and the Terai region. Likewise, small towns will be developed at the meeting points of the East-West and the North-South highways.
2. Scattered settlements in the mountains and the hills have created difficulty in reaching basic services; so they will be developed into densely populated settlements.
3. Necessary studies and research will be undertaken regarding international migration.
4. The data base related to population will be made reliable and scientific.

Implementation Arrangements

The population programmes referred to in the Eighth Plan will be carried out by different ministries. In this connection, the family planning service delivery programme under the Ministry of Health and the population education under the Ministry of Education and Culture will bear significant role. As the involvement and initiative of social organizations and local agencies in the population sector are indispensable, a procedure will be evolved to seek desirable cooperation from them. Incentives will be provided to the local agencies to carry out programmes like maternal and child health, female education, skill development and growth of employment which have direct bearing on fertility rate. It is high time for His Majesty's Government to involve itself more effectively in activities like policy formulation, programme development and coordination before it is too late. In this direction, an 8-member National Population Committee has been constituted under the chairmanship of the Prime Minister. Thus, implementation procedure has now been evolved from the central to village levels. To accelerate the implementation of the programmes envisaged, it is essential to have mass participation; hence, necessary active cooperation will be sought from political agencies, various communication media and the elites of the society. Private sectors will be motivated in the dissemination of information and communication materials.

Manpower and Employment

As more than 49 percent of the nation's total population live below poverty line, the Eighth Plan has envisaged the alleviation of poverty as one of its major objectives. To achieve this end, it is essential to create opportunities of productive employment for the existing as well as rapidly increasing labour force.

owing to high population growth rate as well as women's labour force participation, the number of employment seekers has gone up from 4,850,000 to 8,500,000 during 1971-91. In the last two decades labour force has increased by 183,000 annually i.e. 2.9 percent per annum. However,- the growth rate of labour force has not coincided with the rate of economic growth. As a result, productive employment has not increased, giving rise to the issue of unemployment and underemployment, which has further aggravated the problem of poverty.

Despite the priority given to the generation of employment in the previous plans, there had been no substantial progress in this field owing to the lack of political commitment and weak implementation. The previous plans had surveyed the need for manpower of various levels, but, owing to slackness in implementation, even high-level manpower like engineers, medical doctors and agriculturists were unemployed. At present, the following are the challenges confronting the country in respect of existing manpower and employment:

- According to a recent estimation, labour force will go up at the rate of 200,000 individuals annually, i.e. 2.3 percent during the next plan period. The greatest challenge is to create opportunities of productive employment for them.
- About 650,000 persons are estimated now to have remained unemployed. To create employment opportunities for them is another big issue.
- The existing underemployment poses another difficult problem. According to the present estimation, about 1,000,000 additional jobs will be required to resolve this problem of underemployment.

All these issues cannot be sorted out within a single plan period. it will be the main objective of the manpower and employment policy to reduce the pressure of growing unemployment and underemployment gradually and to involve the maximum manpower in the task of national development in a dynamic and productive manner. Approximately 1,449,000 productive jobs are estimated through public and private investments in various sectors during the plan period. The estimated number of jobs to be created in the various sectors will be as follows:

	Sectors	Employment Growth (in thousands)	Growth Rate (percentage)
1.	Agriculture Irrigation, and Forestry	861	2.2
2.	Industry and Mines	181	13.0
3.	Electricity, Gas 'and Water	2	5.9
4.	Construction	35	6.0
5.	Trade, Hotels and Restaurants	68	6.6
6.	Transport and communication	69	6.7
7.	Finance and Real Estate	10	7.8
8.	Social Services	223	5.9
	Total:	1,449	3.1

The following policies will be adopted to create the above estimated opportunities of employment and enable the nation's manpower to exploit them.

Policies

1. Despite the low growth rate of estimated employment in agricultural sector, it is the only sector which can provide the largest number of jobs in the country; it has the highest potential for absorbing labour force along with productivity within a short period. The agricultural sector will, therefore, receive priority as regards to the allocation of investment. in order to create additional employment opportunities in this sector, investment will be directed towards crop intensification and diversification in particular, as there

is little probability of expanding the area of arable land. Accordingly, agricultural programmes like irrigation, development of cash crops and agroforestry will be emphasized.

2. As unemployment and underemployment are mostly found in rural areas, programmes for developing rural infrastructures will be accorded priority. In selecting these programmes, priority will be given to the programmes conducive to agriculture and other programmes. These rural programmes will be carried out by local agencies as far as possible. Emphasis will be laid on adopting labour-oriented technology in implementing them.
3. To resolve the problems related to rural unemployment and underemployment, small and cottage industries appropriate to rural areas will be provided with incentives. To achieve it, programmes will be carried out with additional provisions of technical assistance, skill training, loan facility, etc. In addition, necessary reforms will be brought in the legal provisions pertaining to industry, commerce, customs and taxation.
4. It is not feasible to sort out employment-related issues in long-term perspective without promoting non-agricultural sectors. For this purpose, necessary policies and laws relating to industry, commerce, economy, customs and taxation will be formulated and implemented. The private sector will assume major role in non-agricultural fields. Foreign investments will also be encouraged for the promotion of this sector.
5. The traditional and non-traditional industries and professions which can rapidly add up to productive jobs will be identified and necessary provisions will be made to promote them.
6. The existing industries and enterprises are confined to a few places in the country. In this connection necessary policies and rules will be formulated and incentives will be provided for dispersing industries and enterprises in various parts of the country, especially in undeveloped areas.
7. Necessary policy measures will be adopted to encourage the use of labour-intensive technologies in agricultural as well as non-agricultural sector. At the same time, emphasis will be laid on the development and extension of technologies contributing to the growth in labour-productivity.
8. As most of the existing manpower in the country is illiterate and unskilled, opportunities for basic education and technical and vocational training will be extended to rural areas in particular.
9. The existing manpower will be made skilful and efficient to compete in labour market.
10. Opportunities for foreign employment will be identified and provisions will be made in an organized way to allow Nepalese workers of different levels to take up jobs abroad.
11. Various types of training programmes will be carried out to promote manpower's productivity. Necessary steps will be taken to offer tax incentives and other facilities to industrialists to organise productivity enhancing training for their workers.
12. Provisions will be made on institutionalized basis to assist labourer for acquisition of jobs.
13. If the present growth rate of labour force continues, it will be difficult to solve the problem of unemployment. Hence, population control programmes will be emphasized in long-term perspective to reduce the above growth rate.
14. Necessary arrangements will be made for the agencies concerned to collect and update information and statistical details related to manpower and employment.
15. Attention will be given to women's maximum participation while formulating various policies and imparting training regarding employment and as far as possible, targets will be explicitly stated. The statistical details pertaining to employment and manpower will be collected in such a way as to specify the status of male and female separately.

Environment and Resource Conservation

Existing Situation

Nepal is well-known all over the World because of the beauty of its natural and cultural heritages. However, for the last few decades, the natural resources have been facing depletion owing to poverty, slow economic development, higher population growth, unplanned urbanization and establishment of industrial sectors, lack of renovation and preservation of the sites of cultural value, lack of environmental education and lack of attention towards the environmental aspects in the formulation and implementation of development plans. Consequently, it has led to adverse impact on the existence of the diversity of plants and wildlife also. The major problems concerning nature and its flora and fauna have resulted from rapid forest depletion, land erosion, loss of bio-diversity, desertification and the deterioration of the soil fertility and so on. In addition, the soil quality has been affected at places due to irrational use of chemical fertilizers and pesticides, resulting in soil and water-related environmental problems.

In Nepal, forests are under tremendous pressure, they are the only source for 90 percent of fuel, timber, fodder and other forest products required for domestic purposes. This pressure is further aggravated by the slow economic growth and increasing population, and with deforestation there has been a decline in productivity in agricultural sector, while the ecology of hills has been badly affected by soil erosion and land slide. Land surface has also been adversely affected by, unscientific cultivation of marginal and steep slope land on hills. A similar situation prevails in Chure region, where an extensive deterioration of the vegetation and living creatures is noticed. Similarly the Soil erosion and flood resulting from the gradual degeneration of this vulnerable region has reduced the fertility of land in the Terai. The soil erosion in Chure hills, which occupies 13 percent of the country's total area, has posed itself as a major national problem.

Land erosion, landslide, decline in the soil fertility of land and lack of suitable employment opportunities have acted as the main contributing factors to migration from high hills to the Terai plain land and urban areas. This situation has aggravated pressure on the limited resources available in urban and plain regions and is disturbing the equilibrium between the hills and the Terai. Several of the erstwhile towns and trade centres in the hills are being deserted now.

Some Past Efforts

As an effort to prevent environmental degradation, the environment and land use policy was incorporated for the first time as a national policy in the Sixth Plan (1980-85). Subsequently, environment was recognized in the Seventh Plan (1985-1990) as an important aspect to be integrated into every development project. However, the related programmes could not be implemented effectively. Political commitment as well as adequate number of efficient agencies to direct, supervise, coordinate and provide consultancy services to these programmes were seriously lacking then. Besides, legal provisions were inadequate and ineffective to protect and promote national natural resources.

Towards the end of the Seventh Plan and later, some important measures have been undertaken for the environmental protection and management. In 1988, the National Conservation Strategy was formulated and approved to preserve national heritages and endowments and in 1990 the Council for the conservation of Natural & Cultural Resources was set up. Similarly, environmental preservation and management was accommodated in the Constitution of Nepal, 1991, and Nepal became a signatory to the treaty on biological diversity and climatic change at the Earth Summit held in 1992. The Eighth Plan has formulated policies related to environment and resource preservation, with adequate attention to the problems existing in the nation's development and environment, and also to the concepts of the Earth Summit Conference.

Policies

1. Environmental management and economic progress are related and complementary processes; hence, the need to develop a system will take environment into account while designing and implementing development projects at central and local levels. For the purpose, planning units aligned with various environments related ministries will be gradually made efficient.
2. At the very outset of designing projects in the areas of involving large-scale physical construction and industrial development which have the potential to upset ecology, care will be taken to incorporate such programmes that minimize the negative impact of environment.
3. Natural and cultural assets, traditional preservation technology and skill, etc. will be documented; the materials available in this sector will be scientifically analyzed and upgraded and bio-diversity, traditional know-how and skill will be broadened in their horizon.

4. Extensive legal provisions will be made and implemented for environmental management. While sustainability will be taken as the top most objective in formulating such legal provisions, emphasis will be laid on adopting an integrated approach in all environmental policies.
5. In addition to the existing condition of natural environment, air, water, noise and land-related pollution will be investigated and analyzed to prepare indicators, scales and action-oriented guidelines for their utilization.
6. People are both the means and end of environment. Hence, the protection and promotion of environmental resources is not feasible without people's participation. That is why emphasis will be laid on disseminating awareness and information among the masses through various communication media, political agencies, elites of society and government and non-government organizations. To widen environmental education, it will be incorporated formally in primary -and secondary-level curricula and informally for other people.
7. Necessary financial and procedural incentives will be provided for promoting voluntary initiative from the industrial sector in achieving continuity in environmental protection and utilization.
8. A high-level Environment Protection Council will be set up to formulate policies, give directives and establish inter-ministry coordination & monitoring related to environmental management.
9. The Regions already degraded or in similar process, will be surveyed and identified and plans for their rehabilitation will be designed and carried out through the concerned agencies.
10. Causes for air, water, noise and land-related pollution will be investigated through on-the-spot observation and mitigating management plans will be formulated to control pollution. In this regard, emphasis will be laid on adopting technology required for minimizing solid waste and reutilizing it.
11. Special care will be taken for proper use and protection of natural and cultural resources in course of carrying out feasibility study for promoting tourism or setting up tourist spots. Environmental management plan will be developed and implemented to gradually check ecological loss at the existing tourist spots.

Programmes

Like, the policies related to environment and resource preservation, its programmes are multi-purpose and multi-faceted. As such, these policies will be implemented through various agencies concerned with the environment and resource protection. In this connection, the following will be the main programmes to be carried out by the various agencies related to environment.

Institutional Development Programmes

1. As the management of environment is multi-faceted and requires the involvement of various organizations, it is essential to establish a balanced approach and coordination among human beings; natural resources, environment and development which will be brought into operation through the establishment of a high-level environment council under the chairmanship of the Prime Minister. The secretariat of the council will be located at the National Planning Commission.
2. Under the guidelines of this council, the planning sections of various environment-related agencies will be strengthened so as to incorporate environmental aspect within their plans for formulating various sectoral plans and their implementation. For the purpose, appropriate manpower will be developed and trained.
3. The manpower existing in the environmental sector will be mobilized and, if necessary, provisions will be made for additional manpower. In this connection, subjectwise environmental aspects will be worked out to incorporate them into school and university curricula.
4. Appropriate measures will also be adopted in monitoring and evaluation systems of examining environment-related activities.
5. Scientific laboratories relating to environment as well as data bank will be set up to install various data bases required in environmental management. Some of the laboratories set up under different agencies will be upgraded to the national level.

Environmental Impact Assessment (ETA) Programme

1. Guidelines for various sectoral agencies will be formulated for environmental impact assessment programme. Prior to carrying out large-scale development projects (esp. road, hydro- electricity, industry, irrigation, housing, drinking water, sewerage, etc.), priority will be given to the obligatory assessment of the environmental impact at the time of conducting their feasibility studies. On the basis of these studies adequate fund will be allocated in the project budget to minimise adverse effects on the environment. Provisions will also be made to monitor whether such environmental impact assessment has been made or not.

Programme for Identifying and Preserving Sensitive Areas

1. Keeping in view the environmental aspect, integrated land-use procedure will be devised. Surveys and studies will be undertaken to diagnose the areas sensitive to desertification. Environment-related projects

will be designed and carried out for preserving and promoting the areas important from the viewpoint of environment through the, identification of ecologically fragile areas and desert land and these projects will be implemented stagewise.

Conservation Programmes for Natural and Cultural Resources

1. Activities like collection, genetic analysis and documentation of important vegetation, endemic species and many other natural living resources will be carried out on a regular basis. A report of genetic resources with future uses will be maintained and provisions will be made for in-site conservation and ex-site conservation in different parks, reserves and laboratories.
2. Appropriate national and sectoral guidelines will be formulated for devising environmental plans of natural and cultural spots.
3. Environmental plans will be envisaged for different natural and cultural sites to enhance the development of tourism and gradually implemented for their conservation and promotion.
4. Necessary research activities will be undertaken with a view to preserving and promoting useful traditional technology, skill and efficiency existing in different regions.

Pollution Control Programme

1. Studies on assessment of existing situation will be undertaken in terms of water, air, noise and soil pollution in order to control them, for which basic indices will be prepared. Action programmes involving appropriate technology will also be carried out to control pollution from various sources.
2. Appropriate management work plans will be made and implemented to control pollution. Similarly; environment friendly land utilisation processes will be developed and put into practice.

Programme for Promoting People's Awareness

1. Environmental knowledge and practical awareness will be promoted on the basis of people's participation by carrying out publicity activities. Various conferences, seminars etc. will be organized for improving efficiency in promoting this awareness. In addition, a report will be published on the existing situation of national resources.
2. Programmes like the incorporation of environmental education in school curricula, dissemination of environmental awareness through communication media and other programmes with NGOs' participation, e.g. environmental education, environmental health, afforestation land use, water conservation, etc. will be introduced environmental education programmes.

Land Utilisation

Agriculture, forest, pasture and other sectors occupy 26.5%, 42.4%, 18.8% and 19.1% of land respectively in the recent land utilization situation in Nepal (See Appendix 1). owing to its geographical diversity ranging in altitude from less than 100 meters in the Terai to 8848 meter comprising plains, valleys, rivers and river basins, glens, alpine. upward, high hills and the Himalayas, there exist different climates and different types of farming within the same district and the same region. In this perspective of land-use, it appears that the concept of dividing Nepal into the Terai Hills and Mountains on the basis of the assumptions made in the earlier plan, needs to be changed. There is indeed a great variation in the amount of rainfall even within the different parts of the Terai and also of the Hills. Likewise, temperature has more than 80% relation with attitude; however, there exists no such relation between rainfall and altitude; that is to say, rainfall varies at the same altitude (See Appendix 2) . Even if Nepal is roughly divided into five geographical regions: Terai. Bhawar, hills, high hills and Himalayan region. There appear diverse pockets in terms of rainfall, temperature, altitude and rivers in terms of irrigation. feasibility, which is the reality for Nepal's land utilization plan.

When we consider land's altitude, steepness, temperature, forest and arable land as a whole, we find that 27.5% of the country's total land is more than 3,000 meters above the sea-level and has limited population density and agricultural production owing to its cold climate. Similarly, 13.6 percent of land is estimated to have steepness of one or a lesser degree and 58.8% land with 20 degree steepness. Owing to extreme steep surface and fragile hill land, there exist problems in Nepal like landslide and erosion resulting in the decline of productivity on the one hand, while, on the other, the process of deforestation causing adverse impact on environment is continuing in the Terai whose forested land is considered suitable for cultivation from the viewpoint of productivity. In this context, the government's past efforts have not been successful to a great extent.

Taking all these facts into consideration, it seems essential to formulate an extensive master plan for developing pasture, arable land, forest, settlements, urban areas, parks, and forest. This study needs to be conducted from social, political, economical, ecological and other practical perspectives. Such a plan will ensure increase in productivity of limited resources and accelerate the pace of achievement and development of physical resources in rural community and eventually make substantial contribution to qualitative improvement in the living standard of most of the rural people.

There is unanimity about land utilization that it would be more beneficial to give priority to the maximum utilization of agro-ecological potentials in the formulation of the plans in the near future, as there continues the predominance of agriculture in the rural development of Nepal. Taking this into perspective, the Eighth Plan has formulated policies in consonance with the sustainable utilization of land available in the country.

Policies

1. In utilizing land resources, priority will be given to more economically profitable activities based on employment growth, as one of the alternatives of various land uses.
2. In accordance with agro-ecological zone to make maximum utilization of regionwise resources on the basis of the diversity of land size and climate, production of food grains, fruit farming and livestock farming will be gradually expanded. In this activity the formulation of district-level plan will have a significant role; hence, a system will be developed to formulate district development plan by preparing districtwise maps compatible with the agro ecological zone.
3. Regional and national agricultural research will be gradually aligned with land-ecology. In order to promote as well as enforce this process, regional and national level monitoring task forces will be created by drawing land-ecology subject specialists from government as well as non-governmental agencies.
4. Non-agricultural land use will be discouraged within the command area of an irrigation project.
5. Measures will be undertaken to preserve the forest in Chure range and Bhawar region for controlling ecological conservation, and controlling land slide and river cuttings. Incentives will be provided for promoting community or lease hold forests in marginal land of all zones.
6. Priority will be given to the extension of the industry, urbanization and commercial farmings within the impact zone of roads.
7. Urban areas will be expanded in terms of scientific land-use planning.
8. As land utilization is a multi-faceted issue, coordination among various facets while framing locally suited policies and devising programmes related to the land use will be adopted as an indispensable process.

9. Initiatives will be undertaken towards designing a master plan in a long-term perspective to utilise the available land in the country from the view point of appropriate economic use by establishing coordination among forest, agriculture, environment and development.
10. Details about land utilization and other relevant information will be made available at both district and central levels and coordinated under the National Planning Commission. In this connection, steps will be taken to update the land-use statistics of LRMP by conducting a model survey, set up computerized Geographical Information System (GIS) and strengthen Nepal Remote Sensing Centre. In order to make landutilization and ecological information effective, an appropriate institutionalized system will be evolved under the National Planning Commission by means of integrating scattered units into a single whole.
11. Necessary amendments will be made in the existing laws relating to land utilization and additional laws and rules will be framed and implemented.

Appendix 1: Land Use Patterns

	Types	Land (in hectare)	Percentage
1.	Agriculture	3,954,915	26.5
	Cultivated	2,969,017	20.0
	Uncultivated	986,898	6.5
2.	Forest	6,306,460	42.4
	Forest Land	5,618,052	37.8
	Shrubs	688,408	4.6
3.	Pastures	1,757,345	11.8
4.	Others	2,836,322	19.1
	Snow Capped Areas	506,317	3*4
	Rocky Surface	1,966,092	13.2
	Stone/Sand	322,428	2.3
	Steep Terrain	5,575	0.0
	Barren Land	13,414	0.1
	Lake/Pond	11,584	0.1
	Urban Area	10,914	0.1
	Total	14,855,042	100.0

Source: LRMP, Land Utilisation Report, Appendix One, 1986.

Appendix 2: Proposed Ecological Zones

Ecological Zone	Annual Average Temperature (Degree Celsius)	Attitude (Meter)
Subtropical	Above 20	Below 1000
I. Warm Temperate	17.5 - 20.0	1000 - 1500
II. Warm Temperate	15.0 - 17.5	1500 - 2000
Cool Temperate	10.0 - 15.0	2000 - 3000

Altitude (Meter)Temperature Zone

Annual Average Rainfall mm.	Below 1000	From 1100 to 1500	From 1500 to 2000	From 2000 to 3000	Dry Month Per Year
Below 500				Jomsom	12
500-10001				Jumla	7
1000-20001	Mahendranagar				8
	Nepalgunj				
	Dhangadhi	Salyan			7
	Bhairahawa	Nuwakot			
	Janakpur	Dhanakuta			
	Dipayal	Patan	Okhaldhunga Chailsa		6
	Simra	Gorakha	Pakhribas		
	Biratnagar	Ilam			
		Silgadhi	Tamghas	Daman	5
		Doti	Bhojpur		
		Dailekh			
			Dadheldhura		3
2000-3000	Butwal		Musikot		7
	Khairenitar	Chautara	Kakani		6
	Hetauda				
	Shyanja	Kanyam	Jiri		5
		Taplethok			3
Above 3000			Lete		2
	Pokhara	Pansayakhola			5
			Lumle		4
	Khudi Bazar				3

Regional Development

Background

Planned development efforts in Nepal were initiated since last three decades or more. Despite some material achievements observed in some socio-economic sectors due to planned development efforts in the last few decades, it will not be an exaggeration to say that there is still a long way to sort out the inconsistencies and problems existing between resourceful and resourceless regions, rich and poor segments of the population and urban and rural communities, in a meaningful way. Failure to mobilise the ever growing population outside of agriculture has compelled large number of people to extend farming even in marginal land for making a living. Population growth has had adverse impact on land utilization in both hill and Terai regions.

Growing population, insignificant development of non-agricultural occupations and population pressure on agriculture have given rise to national problems like migration, land erosion, deforestation and unorganized settlement on the one hand, while, on the other, the Investment policy, while selecting bases for national income growth, has been confined to the development of only a few places with resources and development potential. As a result, the benefits of development have not been proportionately to different regions and the country has to face problems of sorts.

If a country consisting mainly of hills and mountains adopts the policy of allocating development investments on the basis of national income growth potential of the areas, the development benefits will accrue to a few regions and people only. Consequently, most of the regions and people will be alienated and the task of building a single prosperous nation will be further procrastinated. Hence, it is important to lay emphasis on the national development efforts on the basis of regional development so that the country characterized by economic backwardness and geographical diversity may achieve all-round balanced development.

Regional Situation

There is a great diversity in the status of different geographical and development regions of the country. The Terai occupies 23.11% of the country's total area, whereas the hills and the mountains cover 35.21% and 41.68% of the area respectively. In terms of land distribution by development regions, the largest area (22.8%) is covered by the Mid-Western Region, while the smallest area (13.3%) belongs to the Far Western Region. The Western Eastern and the Central Region account for 20% , 19.3% and 18.6% of the total area respectively. The Far Western Region, geographically smallest as it is, also has lesser areas of all physiographic regions namely Terai, hills and mountain. In terms of population distribution, the Terai has the largest population, followed by the hills and then the mountains. Among all regions, the Central Region is the most populated area. According to the preliminary 1991 Census report, the country's population is 18.462 million of which 6.174 million (33.44%) is in the Central Region. The Eastern Region, the western Region, the Mid-Western Region and the Far Western Region have 4.448 million (24.11%) , 3.752 million (20.32%), 2.406 million (13.03%) and 1.681 million (9.11%) people respectively. Terai has the highest population density with lowest density in the the Mountain. In terms of the development regions, the Central and the Far Western Regions have the highest and lowest population density, respectively.

Of the total population (18.462 million), 1.682 million people (9.11%) live -in urban areas. In the census year 1991, there were 33 municipalities in the country. Of them, 9 municipalities were in the Eastern Region, 13 were in the Central Region, 5 were in the Western Region and 3 each were in the Mid-Western and Far Western Region. In terms of sub-regions, the hills in the Central Region and the Terai in the Eastern Region have the highest number of municipalities and the mountains of none of the development regions have any Municipality. Thus, from the perspective of urbanization, the Central Region is the most highly urbanized of all the regions.

As regards land utilization, 18% of Nepal's total area has had no utility at all. Such land includes barren land, land-slide affected areas, pasture land, snow-covered land, etc. The land utilized for different purposes constitutes 82% of the total land, of which the area utilised by human beings is 20%, and the remaining 62% of the area is left to the natural own use. Agricultural land has been regarded as the land utilized by human beings. Similarly, urban areas, plantation areas are also treated in the same category. As Nepal lags behind in urbanization, the area used for this purpose is estimated to be only 0.08% of the total area of the country. The percentages of the total land used for agriculture are 9.3% in the mountains, 43.1% in the hills and 47.6% in the Terai. In terms of land area distribution by development regions, the Eastern Region holds 28.2%, the central Region 26.6%, the Western Region 19.9%, the Mid-Western Region 15.3% and the Far-Wester Region holds 9.9%.

Forest occupies the largest area of the land categories as nature utilised. Of the total forest area (6,306,000 ha., i.e. 42.4%) only 37.8% has genuine forest cover and the remaining 4.6% is occupied by shrubs. Development regionwise, the Mid-Western Region has the largest forest area (27.39%) followed by 21.04% in the Central Region, 18.09% in the Eastern Region, 16.83% in the Western Region and 16.65% in the Far Western Region. It is estimated that about 986,898 ha of land (6.5% of the country's total area) is still available for agricultural purposes.

Looking at the numerical distribution of industries in Nepal, the central Region stands at the lead position with 47.4% of the total industries. Mid and the Far-Western Region each has less than 7% of the industries.

As regards physical infrastructure, the Central Region again occupies a lead position in the regionwise distribution of road transport facilities. The length of roads in the Mid and Far-Western Regions is considerably less. Of the 43 small/large airports in the country, viz. 43, the Eastern Region has 11 followed by 8 in the Central Region, 7 in the western Region, 9 in the Mid-Western Region and 8 in the Far Western Region. As regards regionwise distribution of the postal service under the communication sector, there are 598 post offices in the Eastern Region, 614 in the Central Region, 486 in the Western Region, 305 in the Mid-Western Region and 258 in the Far Western Region. The regionwise split of telephone lines likewise is: 13,640 in the Eastern Region, 52,610 in the Central Region, 5,000 in the Western Region, 3,500 in the Mid-Western Region and 3,450 in the Far Western Region.

There are variations as well in the regionwise distribution of social service facilities like education, health and drinking water. It has been found that these services are mostly confined within the Central Region. There are 22 hospitals in the Eastern Region, 40 in the Central Region, 23 in the Western Region, and 13 each in the Mid and Far-Western Regions with 725, 2663, 724, 303 and 353 beds respectively. Similarly, the distribution of health posts from the Eastern Region to the Far Western Region is 171, 216, 178, 151 and 100, respectively. moreover, Ayurvedic hospitals have also been extending health services. Their regionwise distribution in the same order is 26, 42, 39, 19 and 19, respectively.

As of 1990, there were 5,272 schools, 876,002 students and 22,180 teachers in the Eastern Region; 6,926 schools, 10,78,732 students and 29,301 teachers in the Central Region; 5,960 schools 880,824 students and 23,847 teachers in the Western Region; 3,458 schools, 406,436 students and 11,391 teachers in the Mid-Western Region; and 2,143 schools, 255,313 students and 7,314 teachers in the Far Western Region. These figures reveal that the Central Region outnumbers other regions in terms of number of schools, students and teachers.

One of the major factors responsible for such a regional imbalance is the inefficiency in implementing several programmes in consonance with the regional development policies envisaged in the previous plans. In addition, the atmosphere conducive to implement necessary programmes and projects was also lacking in the past.

Objectives

The objectives for the regional development policy in the Eighth Plan are as follows:

1. To increase regional and national production and reduce regional imbalance by Mobilizing resources and assets scattered in different parts of the country; and
2. To integrate rural development process with the national mainstream by improving the prevailing economic condition of less developed rural and backward areas.

Policies

To achieve these objectives the regional development policies envisaged in the Eighth Plan are as given below:

1. To gradually reduce the imbalance existing in interregional and sub regional socio-economic development; to develop the existing resources and means scattered in various regions and sub-regions on the basis of regional analysis; and thereby strengthen the base of regional development.
2. To gear the regional investment towards minimizing the existing regional and sub-regional Socio-economic imbalance.
3. To establish closest link and coordination among the existing or evolving infrastructure and facilities and production-oriented economic activities, in the context of formulating development programmes for different regions, sub-regions and districts.
4. To develop functional interrelationships between different regions and sub-regions and rural and urban areas. Attention will be given to the development of hierarchical settlement system.
5. To prepare site-profiles of regional development in order to establish appropriate functional interrelations and coordination among national, regional, sub-regional and district levels.

6. To take necessary steps to institutionalise the planning which determines national priority on the basis of regional and sub-regional plans.
7. To implement regional development plans in line with the decentralization policy.
8. To lay special emphasis on the development of internal, transport system appropriate from transit perspective.
9. To pay attention to environmental conservation and promotion while utilizing and mobilizing regional resources and endowments.
10. To precisely determine the means and resources required to devise the model of regional investment for accelerated pace of development.
11. To take necessary steps towards developing urban areas on a planned basis at suitable locations along the Mahendra Highway and North-South link roads in the context of growing pressure of urbanization and to promote small town developments in other suitable areas with a view to support the rural development.
12. To determine appropriate distance to service centres or units in terms of command area with a view to provide necessary services to the rural communities and to carry out welfare programmes for underdeveloped areas and backward communities.
13. To formulate and implement land utilization plan by adopting appropriate strategy to be adopted at regional, sub-regional and local levels so as to make proper utilization of local means and resources including the maintenance of ecological balance.
14. To enable the offices of development-related ministries and departments in each development region to formulate, implement, coordinate, monitor and evaluate development programmes.
15. To seek greater and direct involvement of NGOs and national-level organizations and agencies with due consideration to their scope of activities in regional development programmes.

Decentralisation

Definition

Decentralisation implies a transfer of authority and responsibility from a higher level of a hierarchy to a lower level. Since the majority of the Nepalese people live in the rural areas, it is but natural for development works to begin from the village level. This, in fact, underlies the basic principle of decentralisation. The policy of decentralisation, therefore, implies the process for transferring authority and responsibility to local bodies in the formulation, implementation and effective management of development plans and projects with active participation of the local people. The process of decentralisation in this way attempts to integrate development plans with a more supportive role of the local organisations.

Major Theoretical Aspects of Decentralisation

The effective involvement of the people in development activities will depend largely on clear and simple guidelines, together with the institutional development of local organizations based on motivation, honesty and democratic principles.

The general public need to be mobilized for participation in local development so that they can learn and benefit from their own experiences. Towards this end, His Majesty's Government will allow the people to implement programmes at their own pace. The system of decentralisation that the parliamentary government seeks to establish is based on such close collaboration between the people and the government.

Background

The people's movement in 1989 that led to political change has created a favourable climate for implementing the process of decentralisation in the country. The decentralisation system will provide opportunities to the people to make their own decisions on the development needs of their areas. The new Constitution of Nepal has also made legal provisions for basic human rights and democratic freedom. The laws enacted in 1991 have specified the organisation and functions of local bodies at the district, municipal and village levels. However, the relationship between the central government and the local bodies is yet to be defined clearly. The present policy on decentralisation has been prepared to clarify this essential function.

Two faulty practices relating to local development that were prevalent during the Panchayat regime remain to be reformed. They are, (1) a highly centralized system of administration where higher level decisions are imposed on the lower level, and (2) the lack of commitment and responsibility in carrying out official tasks. These weaknesses have been reinforced by political leaders, carried out by bureaucrats and encouraged by foreign aid.

Political decentralization has now been recognized as the best means for removing these two obstacles to development. In implementing this process of decentralisation, public participation will be sought in various development programmes including poverty alleviation, reduction in environmental degradation and rapid economic development. Decentralization in this way goes beyond the concept of formal government and involves the freeing of local non-governmental and private organisations as well. The role of government therefore is not to dictate but to support the development activities of nongovernmental organizations.

objectives of the Decentralization Policy

1. All citizens of the country should have the freedom to organise themselves to implement development plans. The main aim of the decentralization policy is to support and assist all development activities implemented by the people at their own initiative and to seek to develop the local government as well as non-government organizations involved in such activities.
2. The economically viable development activities need to be directly beneficial to the people, and as far as possible such activities should be initiated by the people themselves. The second aim of this policy is, therefore, to make the government officials and decision makers (local politicians) responsible for providing essential support and services to public organizations engaged in development activities directly accountable and answerable to the people themselves.
3. All transactions relating to development must be carried out with honesty and fairness. The third aim of the policy is thus, to increase public trust in local political institutions by maintaining accuracy and transparency of their financial records relating to development works.

Basic Policy

As indicated above, the most effective way of increasing development activities and cost efficiency is to encourage local organizations to set priorities and implement projects prepared to fulfill local needs. However, the issue of local autonomy versus central control has been raised on different occasions. These aspects are not always taken into account when preparing programmes for development. This policy will focus mainly on the

rights and responsibilities of local government agencies and matters relating to direct involvement of the local people.

1. Plan Formulation and Implementation

The local autonomous bodies, established under the laws governing local development (such as Village Development Committee Act, Municipality Act, District Development Committee Act) , will be given complete freedom of operation. The elected representatives of the District Development Committee will be responsible for all activities related to the social and economic development of the District.

Similarly, the elected representatives of the municipality will co-ordinate the programmes implemented within the municipal area and maintain contact with the District Development Committee for all district-level programmes. The elected representatives of the Village Development Committee will also be responsible for implementing and co-ordinating the programmes within the village area.

In matters of local development, HMG will only have a supportive role of monitoring, supervision and co-ordination. In this context, the non-government organizations and the private sector will be encouraged to provide their services for productive purposes. The central government will accordingly assist and inspire the local people to make decisions that can be effective in implementing local development programmes. This will be the basis for the central government assistance to local development.

A local-level project that is implemented either with foreign assistance or with HMG funds will be classified as a local level project if this can be implemented by local agencies or is not of national importance. Any district-level project that is implemented within one or more districts will also be classified as a local level project. HMG will provide necessary assistance to promote district-level co-operative efforts in development.

If a local development project requires an international tender for its implementation, the tender will be issued at the central level but the project will still be recognized as a local level project.

The local-level government offices involved in implementing the district or municipal-level projects will be accountable to the District Development Committee or the municipality. All local development activities run by these offices will be under the supervision of the District Development Committee and the municipality.

In case the District Development Committee, the Municipality or the Village Development Committee requires technical assistance for development works, they can arrange this through direct contract systems.

2. Control of Local and Central Investments through Local Budgets

It is possible to increase implementation capacity, encourage leadership and increase productivity through greater public participation if the local political leadership is directly and fully responsible to people. The right to make decisions on local-level development expenditure is a basic factor of local autonomy in a decentralized system.

All the authority relating to local budgeting, accounting and personnel will be entrusted to the District Development Committee, Village Development Committee and the Municipality within the next two years. Necessary amendments will be made in the present laws to implement these provisions.

The central government will continue to provide grants and loans to support local development projects. The development grants will be made available in the following ways.

A Local Development Fund will be established to provide block grants to local agencies for the development of districts, towns or villages. Apart from the provision that no part of the grant may be spent for administrative purposes, HMG will not specify any other condition on how the money is to be used. This fund will be operated by the Ministry of Finance and the money will be transferred directly to local bodies without government intermediary agencies.

The funds set up for specific purposes will be used to implement only the specific projects. The guidelines for the use of money by the local bodies will be issued by the concerned central body with the advice of the National Planning commission and the Ministry of Finance. The use of such funds may not be limited only to local government agencies. This fund can also be made available to non-governmental organizations operating at the local level.

3. Use of Revenue Realised from Local Tax or Duty

The people living in towns and villages need to have sources of revenue in order to be independent of the central government. The municipalities and the Village Development Committees will be allowed to retain revenue raised by them to meet local needs, and to carry out local development projects.

The taxes raised from the local people for services and use of resources will be used to operate expand and maintain local facilities. The statement of accounts will be open to public inspection, and a provision will be made for a central agency to audit the accounts at any time.

4. Conditions on Sanction of Grants

The grants provided to the local agencies by the centre need to be related to the increment of revenue at the efforts made for the local level. The central grant will, thus, need to be regulated according to the local capacity to raise revenue. This is known as matching grant concept.. An appropriate policy will be formulated to ensure that the remote rural areas with less population and resources will receive the necessary grants.

HMG will also make regular monitoring on how the central grant and the local revenue are being used. The local agencies which make proper use of local resources and management will be provided with higher grant amounts. Besides the auditing of accounts, arrangements will be made for on-the-spot inspection of projects, and the facts obtained from such inspection will be made available to the general public.

The foreign donor agencies that provide aid for local development purposes will be encouraged to contribute grants directly to local agencies rather than through ministries or other government departments. This arrangement will provide further incentive to local agencies including the non-government and private agencies to prepare and implement development programmes more effectively.

5. Implementation of Central Government Programmes in Local Areas

The Central Government must cease to control the implementation of local development programmes. The Ministries and Departments at the central level have enough work of their own. A programme implemented at the national level is, however, the sole responsibility of the concerned Ministry. such national projects may include national level roads such as, East-West Highway, large-scale hydroelectric projects, central telecommunication network, etc. The majority of the sectoral programmes included in the Eighth Plan are national-level projects. Before implementing these projects, the Ministries concerned are expected to formulate implementation plans and provide guidelines and necessary support to local agencies at the District, Municipal and Village levels.

A local development project, however, cannot be confined to local needs and aspirations. The planning for such a project should take into account the need for coordination between central policy and local needs. The use and management of material resources provided by the Centre will not be in the form of centrally managed project but will be the responsibility of the local agencies. The centre will also provide technical assistance for a more effective use of these materials.

Integrated development needs to be viewed as an essential working principle of the decentralization process. The national-level projects as well as the local development programmes will be regarded as mutually-supportive in the overall development of the districts, towns and villages.

The agency which prepares and implements a central-level project will maintain close contact with the local agencies during the course of its implementation. In case a local programme is contrary to the aims of the central project, the problem will be resolved through evaluation and mutual discussions.

6. The Organization and Functions of the users, Committee

The locally elected representatives will encourage the local people to organize users committees, co-operative societies and other such organizations to fulfil the local development objectives. In this way the elected representatives and the political leaders can focus attention on how such organizations can contribute to local development. the practice of controlling these organizations by influential persons by taking the leadership or employing their own people or by any other means will be discouraged.

If the users' committees are able to formulate and implement development programmes on their own without external financial assistance, they will be allowed to do so. These committees or other agencies will be free to seek technical assistance from government organizations or other sources.

The users' committees should concentrate on such development works that require only a little or no external assistance. Any external assistance, if required or available, will not require to be channelized to them through the centre.

Organization of Users Committee representing the interest of the local people will be encouraged so that everyone can benefit from services such as good education, community health services, social and cultural activities, local roads, bridges, drinkingwater and other physical infrastructure for development. All users of the particular service will have to contribute for the operation and maintenance of the service. This Users' Committee will be given the authority and the responsibility to implement relevant programmes. The District

Officers will provide necessary support to the Committees and be accountable to them, but they will not in any way control or interfere their programme activities.

The Users' Committees will not be politicized. The membership to the Committee will not be based on the political alliance of the members. No person can be a Chairman of more than one Users' Committee at the same time, and a member of the Committee must be a resident of the area and one who enjoys the services provided by the said Committee.

7. Decentralisation and the Role of Non-governmental Organizations and the Private Sector

The local agencies and Users' Committees need to be provided organizational and technical assistance for implementing development activities. They would also need the services of wholesalers, retailers, private firms and other financial institutions for the procurement of essential commodities and the sale of their products.

If the local-level or -regional-level line Ministry offices are unable to provide the required services, the local bodies will advise the Users' Committee to seek assistance from nongovernmental organizations. Arrangements will be made for a nongovernmental organization or the private sector and the Users' Committee to enter into contracts system, the use of volunteer service and other management services. The local bodies also need to maintain close contacts with the private sector by exchange of necessary information. In addition to this, the private firms will be encouraged to implement essential economic programmes that would promote balanced economic development of the country.

8. Programme to Increase Efficiency of Local Bodies

The main thrust of decentralisation is to upgrade the working capacity of local bodies under the leadership of local representatives. If the local bodies can develop a greater sense of responsibility through training of their members, the trust of the people and their participation can increase. The commitment to local development can be developed only through necessary reforms in the administrative and management systems.

It is necessary to provide training to the locally elected representatives, the officials of the Users' Committee and the local people on how development programmes are to be implemented under a decentralised system. Various conferences, seminars and training programs will be organized in the districts to improve efficiency and work skills. Seminars and workshops of elected representatives of districts, towns and villages will be made more effective and compatible with decentralization policy.

While formulating the training programmes for the local bodies, attempts will be made to have maximum participation of the concerned bodies in the choice of subjects and methods. In the past, the normal practice was to rely more on unproductive development speeches rather than on teaching of practical skills.

While organizing training programmes for the local people associated with users groups, attention will be paid to their needs and reasonable financial and other incentives will also be provided. In the remote areas where most members of the Users' Committee may not be aware of the new concepts, preliminary seminars and workshops will initially deal with known and simple work systems and then gradually cover higher level subject matters.

Prices

Background

As the majority of the Nepalese people have low levels of income, it is essential to raise their living standards by controlling undue increase in prices. Toward this end, the national saving rate should increase so as to channelise it in the production sector. However, in the context of the country's present economic situation, in order to implement the plan in the country, most of the development projects expenditures have to be financed by taking foreign loans and grants. This has increased the net foreign assets and the money supply on the one hand and on the other hand, the high rate of increase in the loans to the government and the private sectors from the banking sector has also helped to increase the monetary expansion. Moreover, the rate of inflation has been increasing continuously due to slow increase in the production of the essential commodities in relation to increase in the money supply. In order to address this situation, the Eighth Plan has adopted policies to maintain a balance between demand and supply by increasing production and productivity.

Nepal being a small land-locked country and as it has to depend on foreign trade for its economic development, the international and particularly, the Indian inflation rate has direct or indirect impact on its inflation rate. Nepal's price situation needs to be observed in this context.

Progress during the Seventh Plan

During the Seventh Plan (fiscal year 1985/86 to 1989/90), there was a great pressure on the price level. In the first year of this plan, the national urban consumer price index was increased by 15.8 percent. During the entire plan period, the average annual price index increment rate remained at 11.9 percent. The internal causes for this high rate of price increment was due to the devaluation of the Nepalese currency by 14.7 percent, the high rate of increase in the money supply, gradual increase in the prices of goods and services produced by the government enterprises and private sectors; and an increase in tariffs, sales taxes and excise duties, etc. In the same way, the increase in the price level in the international market and particularly in India put a great pressure on the price level in the Seventh Plan period.

National Urban Consumer Price Index

Fiscal Year	Edible Products		Non-edible Products		All Products	
	Index	% Change	Index	% Change	Index	% Change
1984/85*	325.4	18.5	327.1	10.8	325.8	15.8
1985/86*	374.8	15.2	358.1	9.5	368.6	13.3
1986/87*	420.1	12.1	390.5	9.0	409.3	11.0
1987/88**	444.9	5.9	440.6	12.8	442.4	8.1
1988/89**	165.9	-	153.7	-	161.3	-
1989/90**	181.9	9.6	177.2	15.3	179.9	11.5
Annual Average	12.3		11.5		11.9	

* Base Year (1972/73 = 100)

** Base Year (1983/84 = 100)

Price Situation during the Interim Year

After the completion of the Seventh Plan in 1989/90, the following two fiscal years; 1990/91 and 1991/92 were the years of plan holidays. After the collapse of Panchayat System and the establishment of a democratic government in the month of April, 1990, the improvement in the relation between Nepal and India made a favourable impact on the price situation which made the country able to maintain the inflation rate at 9.8 percent in the fiscal year 1990/91. The inflation rate, however, increased to 21.1 percent during the fiscal year 1991/92. The causes of this high rate of inflation was due to the devaluation of the Nepalese currency against other convertible currencies by 20.9 percent during the last week of June 1991, the increase in the prices of raw materials and manufactured goods imported from the third countries following the adoption of partial convertibility of Nepalese currency with other convertible foreign currencies in the month of February, 1992, decrease in agriculture production due to unfavourable monsoon, and price increases in goods and services produced by government and private sectors industries, etc.

Policies

An increase of small percentage in the price level is warranted in the course of the country's economic development. However, an undue rise in the price level will have an adverse effect on the country's economic development. Considering the possible negative effects on the economic development of the country in either condition, the rise and fall in prices must be limited to a certain extent. Price policies in the Eighth Plan will be as follows:

1. In keeping with liberal policies designed to encourage development in the economic sector, pressure on prices will be minimised by involving the private sector in production and distribution system.
2. Line ministries will make a listing of daily consumer essentials in order to facilitate regularity in the supply of domestic produce and imported items (such as rice, pulses, spices, sugar, milk, salt and kerosene, etc.). Line ministries will also develop reliable statistics relating to domestic production, demand, surplus/deficit of the listed items and partial or full import requirements. On the basis of such statistics, policies will be adopted to maintain prices at desired levels by ensuring regularity in the supply management of necessary goods.
3. In previous years, the export of domestic essential produce (such as rice, wheat, oilseeds, etc.) was restricted. But these items were smuggled out of the country due to the lack of a control mechanism along the border. When large scale smuggling led to a deficit in supplies within the country, these same goods were then imported at higher prices, leading to increased pressure on domestic prices. The government will observe tight controls in border areas to discourage unauthorised trade. But the domestic transit of local and imported product will not be restricted as such a move could hinder supply management.
4. Stock ceilings will be enforced among mill owners, wholesale and retail traders to break the present monopoly of large traders in the foodgrain trade. To roster a liberal economy, a competitive atmosphere will be created where cooperatives and the private sector will be involved to the maximum possible extent in the trade of essential commodities.
5. In order to relieve the general public from hardship by maintaining regularity, the Nepal Food Corporation will build adequate stocks of essential foodstuffs. When prices rise above desired levels, the corporation will intervene in the market to check prices. The role of Nepal Food Corporation in the supply of essential commodities to remote areas will be further intensified in light of the small number of private sector entrepreneurs willing to undertake the job,
6. The practice of giving subsidies by the government to recover losses incurred while fixing the prices of goods by the government such as foodgrains, chemical fertilizers and petroleum products will be gradually eliminated. In order to roster favourable effects on prices through the healthy and competitive involvement of the private sector and cooperatives, the monopoly of public enterprises in the import and distribution of these goods will be discontinued.
7. As the expansion in money supply has also contributed to price rises in the past, the rate of expansion in money supply will be kept within limits, in consideration of economic stability.
8. As recurring government budget deficits were among the main reasons behind the rapid expansion of money supply, attempts will be made in the coming years to keep budgetary deficits within stipulated limits.
9. While efforts will be made to ensure regularity in supply management to increase internal production, policies will be adopted to import deficit items from cheapest possible sources. Measures will also be introduced to eliminate differences in import prices arising from varied rates of customs tariff.
10. The price level will not be allowed to increase beyond 9.0 percent on an average during the plan period.

Financial Resource Mobilisation

The policy of financial resource mobilisation has an important role in achieving the objectives envisaged by the Eighth Plan. To achieve these objectives, the increase in share of investment in Gross Domestic Product of the economy is needed. In addition, it is equally necessary that the investment structure also takes a directional change favourable to the economic and social development efforts of the country. Furthermore, in the context of the liberal economic policy adopted by the nation, the formulation of a policy on financial resource mobilisation has become necessary to orient the available government and non-government sector's economic resources towards right direction. The mobilisation of financial resources with due attention to the interrelationships among various macro-economic policies for the maximum utilisation of the opportunities of development generated by the liberal economic policy and an increase in the Gross Domestic Saving rate in the economy have become necessary for development. This policy has been formulated taking these facts into consideration.

Existing Challenges

Although the Seventh Plan (1984/85 - 1989/90) had stressed on resource mobilisation for increasing investment, it failed to achieve the targeted progress. This led to the emergence of the following problems in the mobilisation of the resources.

- 1. Deficit Gross Revenue Mobilisation:** Nepal joined the rank of those countries which mobilises low total revenue in the share of the Gross Domestic Product. In the fiscal year 1984/85 the tax revenue constituted 7.1 percent and the non-tax revenue 1.7 percent and thus, the total revenue comprised 8.8 percent of the GDP. In the fiscal year 1989/90, the share of total revenue in the GDP reached 10.2 percent with the tax revenue contributing 8.0 percent and the non-tax revenue 2.2 percent. In the same way the revised estimate for 1991/92 shows the total revenue will stand at 10.2 percent with tax revenue contributing 7.7 percent and non-tax revenue 2.5 percent. This situation evidently vindicates the need for increasing the quantity of the mobilisation of the revenue.
- 2. Increase in Regular Expenditure:** The regular expenditure has shown an excessive growth in total government expenditure. In 1984/85, the share of the regular expenditure in the GDP was 6.5 percent, which increased to 7.3 percent in 1989/90. In the fiscal year 1991/92, the revised estimate of this expenditure is 7.4 percent. This increase in regular expenditure stalled any possible positive impact on revenue savings. The revenue savings stood at 2.3 percent of GDP in 1984/85, which remained at 2.9 percent in 1989/90. In the fiscal year 1991/92, the revised estimate for this savings is 2.8 percent of the GDP. Thus, without changing the present revenue savings ratio, there exist few possibilities to bring about any favourable changes in the government financial position.
- 3. Dependence on Deficit Finance Mobilisation:** Because of the absence of desirable changes in the revenue savings, the deficit finance mobilisation has emerged as a permanent mechanism of resource mobilisation to general resources for the growing development expenditure. The share of deficit finance in GDP was 4.1 percent in 1984/85 and it remained at 2.7 percent in 1989/90. The revised estimate of this share in 1991/92 is 1.0 percent. Thus, the deficit finance mobilisation has shown a declining tendency. However, if enough resources are not mobilized through revenue and foreign assistance, the government's dependence on deficit finance will remain a characteristic feature. Thus, it appears that the deficit finance had exerted lower pressure on the non-banking sector than on the banking sector in the past, which clearly indicates the prevalence of a situation of an undesirable competition between the government and private sectors.
- 4. Increased Reliance on External Resources:** Because of the insufficiency of internal resource mobilisation, the reliance on external resources for financing the development expenditures grew heavily. In 1984/85, while the foreign assistance contributed 48.8 percent to the total development expenditure, this contribution increased to 61.1 percent in 1989/90. The share of foreign assistance in development expenditure decreased to 52.7 percent in 1990/91, but it will be salutary to further decrease its share in the years to come. It is certainly not desirable to depend excessively on foreign assistance for our development efforts.
- 5. Disparity between Foreign Assistance and Utilisation:** In the foreign resources front, the disparity between foreign assistance commitments and its actual utilisation has become a matter of concern. The actual utilisation of foreign assistance in 1984/85 stood at 44.7 percent of the commitments, which

decreased to 40.7 percent in 1989/90⁶. Thus, the deficiency in the absorptive capacity has emerged as a problem than the insufficiency in the external resource mobilisation.

6. **Predominance of Loans in Total Foreign Assistance:** During the Seventh Plan period, the loans had a predominant share in the total foreign assistance. The share of loans in foreign assistance in 1984/85 stood at 65.5 percent, which further increased to 72.0 percent in 1989/90. In the fiscal year 1990/91, this share went upto 77.8 percent. This situation has clearly enunciated the fact that a proper utilisation of available resources needs to be emphasized as much as the search for the additional resources while formulating resource mobilisation policy.

There are various factors that have contributed to the emergence of these tendencies i) government. financial position. The main problems include the lack of timely and procedural reforms in the prevailing revenue regime, revenue pilferage allegedly occurring in large amounts, narrow revenue bases lack of training and skills among employees, low flexibility in revenue regime failure to use the external resources fully, etc. These problems will be gradually removed and in order to generate revenue for maintaining a high and sustainable rate of investment the following additional resource mobilisation policies will be adopted during the Eighth Plan period.

Objectives:

The main objectives of the resource mobilization policy in the Eighth Plan will be the followings:

1. To assist in increasing the Gross Domestic Saving Rate by changing the unnecessary and inappropriate consumption patterns
2. To create a conducive atmosphere for channelling the investment to productive sectors by raising the total investment growth rate by 3.0 percentage points during the plan period.
3. To avail regular supply of financial resources in required quantity in order to carry out development activities in an uninterrupted and sustainable manner
4. To make efforts for efficient mobilization of internal resources and to make appropriate and optimum utilisation of foreign assistance.
5. To utilise the internal and external resources in a complementary perspective taking their interrelationships into consideration.

These objectives have been taken into account in the formulation of the policy of financial resource mobilisation, which encompasses the mobilisation of both internal and external resources.

Policy Based Programmes

1 Internal Re-source Mobilisation:

The mobilisation of internal resources will be emphasized for meeting the need of increased investment for development works and for gradually replacing the foreign assistance. The following special efforts will be made to bring about a structural change in the internal resource mobilization. On the one hand, new measures of resource mobilisation will be adopted and, on the other, appropriate changes will be brought about in the prevailing revenue regime. To raise the share of revenue in GDP, the revenue will be increased by 2.5 percentage points during the plan period, thus raising the share of revenue in GDP to 13.4 percent. For this, both tax and non-tax revenue sources will be used to the maximum extent.

- (a) In the tax revenue front, the tax system will be made simple and extensive by making appropriate changes in the structure of the tax system. The local and central level taxes will be clearly defined in the plan period.
- (b) By reviewing the purposes of various taxes, any vague and multi-faceted purposes will be replaced by one purpose for one specific tax.
- (c) In the context of the agriculture sector not having been brought within the domain of the tax regime, an appropriate tax system will be developed and implemented with the objective of commercialising the agriculture sector.
- (d) With a view to promoting the sales tax as a revenue base for resource mobilisation by merging several prevailing taxes with it, it will be eventually developed into value added tax.

⁶ However, the foreign assistance utilisation figure of 1990/91 has exceeded the approved amounts. This is to be considered as an exception, in view of the inclusion of the previously utilized amounts into the figures for 1990/91.

- (e) While excise duty will be limited to some specific items the excise system will be modified in keeping with the liberal economic policies adopted by the government.
- (l) Extensive reforms will be made in customs to bring about uniformity in tariff rates and necessary arrangements will be made to bring the tariff system in line with international conventions.
- (g) The prevailing income tax rates will be reformed, simplified and extended.
- (h) Land revenue will be reviewed and gradually developed as a local resource.
- (i) Wealth tax will be further refined and made more practical in line with social justice.
- (j) Reforms will be made in revenue administration. Organizing a separate administrative set-up in the revenue sector, it will be made more scientific, efficient and effective. Simplification, clarity, transparency and efficacy will be infused into the tax and non-tax administration. At the same time, necessary measures will be adopted to minimize revenue pilferage. Training programmes will be conducted to strengthen the revenue administration and make it more efficient. At the same time, the organisational structures of administrative agencies will be further strengthened and necessary studies and reviews will be conducted.

These changes will impart more flexibility to the revenue structure and especially to the taxation system and augment revenue collection. At the same time, these measures will contribute to production growth by encouraging the private sector savings and investments. These arrangements will increase the share of direct taxes in the total tax revenue collection, which is expected to bring about sustainability in the mobilisation of internal resources by reorienting revenue collection presently based heavily on external trade towards internal production.

The non-tax revenue includes the income from the selling of government goods and services, profit, principal and interest. Prices of such goods and services will be fixed in accordance with the cost of production and by maintaining quality standards of these goods and services. Such services will be extended on the basis of their investment cost and their rates will be reviewed periodically.

2. External Resource Mobilisation

- 2.1 Emphasis will be laid on maximum increase in the utilization or productivity of resources obtained from external sources.
- 2.2 Special efforts will be made to utilise the available resources as the inability to utilise them has been a bigger problem than the mobilisation of additional external resources.
- 2.3 Foreign loan assistance will be drawn only for areas accorded priority by government and the role of government will remain dominant in the formulation and execution of such projects. The preference for the services of foreign consultants will be modified to develop a trend to use the services of Nepalese professionals as far as possible.
- 2.4 The selection of projects for external assistance will be made in specific areas identified by the plan in terms of priority.
- 2.5 Foreign loans will be approved only for productive programmes and for other programmes external grants will be mobilised as far as possible.
- 2.6 Commercial loans will not be accepted in normal circumstances. they may be accepted only in exceptional situations depending on the nature of the project.
- 2.7 Necessary arrangements will be made for the private sector, if it seeks to mobilise foreign loan investment at its own liability.
- 2.8 Provisions will be made to avoid duplication and to increase the utility of assistance received from international organisations by allowing its use with the participation of the private sector or through other organisations only in areas specified by the plan.
- 2.9 Special attention will be paid to subjectwise and countrywise reconciliation of the foreign assistance in order to ensure the initiation and completion of the foreign aided projects according to the programmes fixed in advance. The existing system of aid consortium will be utilised to the maximum to mobilise the aid commitments from international agencies and foreign countries in a coordinated fashion.
- 2.10 An estimation of the internal and external resources will be made for three years for the main projects being operated under foreign assistance to eliminate the disparity between the available external resources and their utilization. Efforts will, thus, be made to prevent the implementation of projects from being adversely affected by the scarcity of resources by ensuring the availability of both external and internal resources in adequate quantities in advance.

The above mentioned policy based programmes will contribute substantially to achieve a sustainable growth rate in economy during the Eighth Plan by facilitating the effective utilisation of external resources.

Money, Banking and Credit

Monetary and credit management aspects have their own peculiar significance in the macro-economic management. In monetary management system, on the one hand, there is a need to orient the quantity of money supply in accordance with the actual demand of the economy on regular basis. On the other hand, the flow of financial resources in credit management system cannot be left to the discretion of commercial banks and financial institutions, it is also necessary to direct the flow of these resources in greater quantities to the socially debilitated but productive and priority-accorded sectors.

In the context of Nepal having adopted an open economy, an excessive level of liquidity will initially exert pressure on the balance of payments and foreign exchange reserve and subsequently cause adverse effects on the domestic price situation. Thus, it will be necessary to maintain a balanced monetary position to attain the economic growth rate envisaged in the plan. The sustainable economic growth can only be achieved if the monetary balance is maintained.

Another important objective of monetary management is to achieve maximum mobilisation of internal resources. The monetary policy needs to be oriented towards encouraging the people to save through the creation of a competitive environment among banks and financial institutions and motivating the desirous entrepreneurs to mobilise the available resources through the collection of the scattered savings in production and employment generating programme in the country. In this perspective, it is necessary along with a planned process of economic development to initiate programmes that can create new financial bases for the economy, consolidate the existing ones and encourage healthy competition. A review of the requirements and availability of resources reveals that there is a tremendous resource gap between resource requirements and its availability in the country; this is indeed indicative of the fact that a large share of private savings is still lying outside the domain of institutional systems. In this context, an efficient mobilisation of internal resources can further enhance the participation of the private sector in the economic development of the nation.

Current Challenges in the Monetary Sector

It is necessary to Control the rate of monetary expansion in harmony with the development of the real sector in order to maintain internal and external balance in the economy but. this has not, been achieved as yet The main factors contributing to the Prevalence Of this Situation are (a) failure to minimize the role of the government, (b) continued increase in net, foreign assets leading to increase in liquidity, (c) failure to enhance resource mobilization by banks and institution in a warranted manner, (d) the position of the money market and the scarcity of alternative monetary tools, (e) lack of dynamism in the capital market, and (f) the absence of a competitive environment.

Over the recent years, there were some efforts made to prevent the government sector from becoming a cause for monetary expansion by gradually limiting its role but there has not been any significant decline in the government role except in a very few instances. The present government has adopted the policy of limiting the role of the government gradually to prevent it from causing monetary expansion and developing the private sector as the backbone of the economy. In this context, it is incumbent upon HMG to observe strict monetary discipline. The continued growth in net foreign exchange assets and the subsequent liquidity generated by this have become the main factors causing monetary expansion. There have not developed any effective measures to counteract the adverse impact of the above mentioned growth on monetary liquidity. The central bank can issue or sell government treasury bills or Nepal Rastra Bank bonds under its ownership in order to control the monetary expansion created by the increased foreign exchange reserve. However, this measure also does not seem to be easily attainable in the context of the extent of security and the limited demand for the securities. It is the repayment of long term external loans and the adoption of a flexible import policy that can possibly remedy this adverse effect of increased reserve. However, this requires the identification of an appropriate level of foreign exchange reserve.

One of the main reasons behind the failure to achieve monetary stability is the lack of warranted increase in mobilisation of internal resources by banks and financial institutions. With the objective of enhancing the efficiency of capital through healthy competition among financial institutions and thus achieving maximum utilization of internal resources, the Nepal Rastra Bank gradually liberalised the bank's interest rates and allowed full autonomy in this respect in August, 1989. This policy of independent interest rates was expected to reduce the disparity between deposits and credit through an increased rate of interest on the deposits but this, too, did not materialise. Consequently, the Nepal Rastra Bank adopted an increment of 2 percentage points in the bank rate for the commercial banks to adopt an expensive monetary policy. The implementation of this policy also could not raise the interest rates as expected. The existing banks and financial institutions in the country have not

been able to undertake the functions of mobilising the deposits, increasing the flow of credit disbursement by identifying potential sectors for investments, developing new saving schemes, and creating a favourable environment to win the confidence of the general public in the banking system. Consequently, the banking sector has not been able to develop a profound financial intensity. A greater proportion of financial assets in Gross National Income alone can ensure the efficacy of monetary policies, and in this context, it is essential for the banks and financial institutions to create an atmosphere conducive to financial development.

Other factors preventing the monetary development and stability are the preliminary stage of the money market and the lack of proper monetary tools. The money market even after having traversed through a long stretch of planned economic development has remained in its rudimentary stage. There exist severely limited alternative monetary instruments in the money market to facilitate the investors to make use of their savings. The government treasury bills and the central bank securities are only short term investment expedients to the institutional investors. The market for call money has not shown a favourable development either. In this situation it has become imperative to make appropriate arrangements to develop new alternative instruments to infuse dynamism into the money market.

It requires a dynamic capital market to mobilise the internal resources and attain a favourable economic growth rate. Our capital market, however, is still in a preliminary stage. The Security Exchange Centre has not been able to arrange any institutional brokers, nor has it been able to manage swiftly the issuance and sale of shares and bonds of industrial units. It is primarily concentrated in operating a second market for especially government securities. Consequently, the capital market has not been able to mobilise the internal resources in expected quantities.

The absence of requisite financial development even after a long period of planned economic development efforts can be attributed to the lack of a competitive spirit among banks and financial institutions. It is necessary to develop new financial institutions, leasing companies, banks in the private sector or with joint foreign investment and other specialized agencies for the creation of a competitive environment. These arrangements can develop the prerequisite infrastructure for the creation of a healthy competitive atmosphere and only then can a systematic utilisation of the savings scattered among the general public be assured.

The rural branches of commercial banks opened in the rural areas of Nepal do not seem to have activated their role effectively in deposit mobilisation and loan distribution. In view of the contradictory situation where the ratio of a banking office and population points towards the lack of adequate number of branches of commercial banks on one hand, and the existing branches have failed to deliver results, on the other, the banking sector and credit system of ours appear to be fraught with challenges. The unorganised market appears to be playing a role greater than that of the institutional market in meeting the credit needs; this situation seems to have minimised the contextual importance of interest rates and credit policies. The great disparities between the interest rates of institutional and unorganised market have evidently created the existence of a dual credit system. As long as this dual system continues, the efficacy of the credit system and monetary policy naturally becomes reduced.

To solve the above problems, it is necessary to further extend the banking system. Along with establishing new branches of banks and financial institutions, the existing branches need to be properly developed and expanded. This requires promoting a habit among the people to deposit their savings in banks and making it more attractive. By developing new monetary and fiscal tools and providing returns to these savings the financial saving should, thus, be made more attractive in comparison to investment in other unproductive assets. This also requires arrangements for appropriate interest rate structure and grades, otherwise the financial savings may not grow as expected. Increased financial savings alone will not be sufficient, it will be necessary to channel them to productive employment oriented sectors. This again calls for proper identification of viable projects and fulfillment of an adequate loan demand of the entrepreneurs. The entrepreneurs will be obliged to resort to borrowings from the unorganised market to fulfil their needs, if they have to encounter various cumbersome procedures and hindrances in obtaining loans and also if the loans are not available in time in sufficient amounts. To solve this problem, it is necessary to simplify and upgrade the quality of loan distribution procedures.

As regards credit utilisation, the commercial banks have not been able to make available credit facilities in the priority sectors as targeted. The commercial banks have failed, in particular, to identify viable agricultural, cottage and small scale projects and attract entrepreneurs towards them. However, without the promotion of such activities, the development of one of the poorest agricultural nations like Nepal does not seem to be an eventual possibility at all. A healthy development of the financial sector and an additional increase in the income of the common people can create a stronger base for additional investment in development activities through the enhanced financial savings accumulated in the banks. This is also one of the reasons why the commercial banks should be stronger and more capable of directing the flow of credit extension to the priority accorded sectors. It is necessary to further motivate the commercial banks towards this end.

The disparity between the rate of interest offered on deposits and the one charged on loans reflects the efficiency of the financial sector. This disparity is of a higher degree in Nepal. This has given rise to a situation where on the one hand, the deposit mobilisation has not occurred as expected and, on the other, there looms in the horizon the fear of credit facilities becoming more expensive. To remedy this situation, the banks need to control their overhead costs, lighten the burden of redundant staff and render the banking activities more efficient and cost effective through the utilization of new, innovative tools and technologies. It is equally important in this context to observe strict financial discipline and avoid red-tapism and procrastination in making policy decisions and in working procedures.

Monetary and Credit Programme in the Eighth Plan

In view of the significant role of the banks and financial institutions in resource mobilisation, it is absolutely a prerequisite condition to enhance the efficiency and Soundness of the banking and financial sectors. The banking promotion and credit programmes of the Eighth Plan have been formulated with a view to increasing the employment opportunities the productive base of the economy- through the mobilisation of resources and consolidation of their proper utilisation.

1. Utilisation of Indirect Monetary Instruments

Nepal has now adopted a liberal economic system. The banking and monetary policies also have been so trained that they reconcile with this liberal policy. Accordingly the desirable standards of monetary and banking resources will be determined with the help of indirect instruments without, any direct interference. With the objective of assisting in the refinement of excessive liquidity observed in the economy, a liquidity proportion of 36 percent was fixed with arrangements for cash balance to be compulsorily available to the tune of 12 percent of the deposits and 24 percent of total deposits to be invested in government treasury bills or bonds issued by the central bank. The provision of maintaining additional liquidity of 24 percent of deposit will be done away within the very initial Years of the Eighth Plan.

The monetary sector will instead accord preference to open market techniques in order to assist in the macro economic management. In the event of an excessive demand for financial resources in the economy, the Nepal Rastra Bank will reduce the liquidity through the sale of treasury bills or bonds issued by His Majesty's Government or the bank itself. The Nepal Rastra bank when bringing about changes in the bank rates as an indirect monetary instruments will inform the banks, financial institution and the general public about the nature of the monetary policy, whether it is expansionary or contractionary.

2. Credit Extension to Priority-Sectors

The present provision for a bank to extend a specified proportion of total credit outlay to priority sectors calls for a review in the present context of the liberal economic and monetary policies. The banks are allowed to use their own discretion whether to extend credit facility to such sectors to the tune of 12 percent of the total credit in the present system. However, in spite of adopting the liberal policy, the concept of priority sectors and a directed flow of financial resources to them cannot be totally forsaken in view of the great need of capital among the skilled and enthusiastic entrepreneurs with meager income and, above all, the government's commitment to development of the rural sector. Therefore, it is targeted to establish separate rural development banks on a regional basis solely for the development of the rural sector. These banks will function as specialized agencies to channelize the flow of credit to the priority sectors. A detailed programme in this regard will be put forth for implementation within the initial years of the Eighth Plan.

3; Formulation of Monetary Programme

An efficient utilisation of resources is equally as important as the arrangement of resources for economic management. Therefore, internal and external stability in using financial resources needs to be specially emphasized. In the Nepalese context, if there is a monetary or credit expansion beyond a sustainable limit, there will be an increase in the prices of goods and services on the domestic front, which will lead to increased import to meet the growing demand. This will adversely affect the balance of payments situation, deplete foreign exchange reserves and on the whole create imbalances in the external sector as a whole. To avoid the emergence of such situation in the economy, a monetary programme will be formulated on the basis of an extensive analysis of the economy at the beginning of every fiscal year by reconciling the physical sector and monetary or credit sector with each other for maintaining a balanced situation. Therefore, the growth rate of money supply and credit structure will be determined in a manner compatible with the changes in different variables such as sustainable economic growth rate, inflation, and external situation etc. As stated above in the same context, monetary and credit management will be conducted by utilising indirect instruments.

4. Policy of Positive Rates of Interest

In the event of the real rates of interest acquiring a negative trend, there may appear hindrances to the mobilisation of financial resources. Similarly, if the interest rates are not maintained at an appropriate level, the resources may be utilised in less productive sectors and the economy may not obtain reasonable returns from the investment. Therefore, it is necessary for a policy on interest rates to be able to solve this problem, and efforts will be made to the fullest possible extent to make positive interest rates. Hence, the monetary and financial policies will be put into use in keeping with the same objective.

5. Government Role and Interference in Credit Management

In one of the poorest nations like Nepal where there live a large section of population below the absolute poverty line it is necessary to enhance their productivity and increase employment opportunities for them. And, in the context of the changed economic policies, it becomes a national duty to make available some returns of development efforts to these people, too. The credit extension under various programmes to be conducted in the priority sector, in particular, needs to be directed mainly to these people alone.

Our past experiences have demonstrated that a simple and convenient procurement of a loan is of greater significance than its rate of interest. The banks and financial institutions should mobilise credit extension to these groups in such a manner that they make some profit over and above the realisation of the actual cost. This section of the population also should not be treated as an exception in the application of the technique of determining an interest rate on the basis of demand and supply situation. However, the creation of an environment in which there is an assurance of the credit facility is a prerequisite condition. The confidence of being able to obtain loans can infuse dynamism into the economic activities of these people, too.

At the very initial stage of the implementation of the credit programmes in the Eighth Plan, special attention will be paid to the needs of the targeted groups and the utility of credit. Similarly short term expedient measures such as granting subsidy or waiving interest or even the loan amount on political or personal grounds, although they may look attractive initially, will be highly discouraged as they may deplete or debilitate the allocation of the resources of the economy in the long run.

6. Total Bank Credit Structure

In the past, a considerable share of the limited bank credit outlay was procured by the government. Furthermore, the public enterprises also obtained huge sums of money on government guarantee. In consequence, the private sector was often deprived of the opportunity of any credit facility.

Now, in the context of HMG pursuing a policy of fiscal discipline, the budget deficit has declined and the monetization of the deficit has been considerably minimized too. This trend will be continued during the Eighth Plan. Similarly, as the credit extension to public enterprises on government guarantee adversely affects the soundness of the financial institution and of the commercial banks in their finances, a policy will be adopted to follow the usual market techniques for providing loans to government undertakings. The banking sector will assist through credit extension in the efficiency and productivity enhancing activities of the private sector in domestic or foreign trade.

7. Expansion of Branch Offices

The expansion of branches entails an unnecessary increased burden of expenditure on the commercial banks and financial institutions causing an adverse impact on their profits. In view of this experience, the branches will be extended on a commercial basis only to economically viable and appropriate places. Expanding the activities of the branches running in loss, efforts will be made to operate them in profit. The branches which fail to show any profit, even after functional adjustments will either be merged with the nearest banking office or dissolved. However, appropriate programmes may be introduced to provide some banking services even in the areas without banking offices or without any feasibility of any economic activities expanding within a short period. These programmes may include the introduction of Post-Office Saving Bank, Mobile Savings Bank, Mobile Credit Bank and Cooperative programmes, etc.

8. Strengthening of Banking and Financial Institutions

Necessary steps aimed at appropriate allocation of Financial resources will be taken in the following subjects on the basis of the position of the economy. These steps will strengthen the financial position of the banks.

- a. Transparent rules on directed loans,
- b. Sufficiency of the deposits of banks and financial institutions,
- c. Simplification and transparency of laws and regulations relating to banks and financial institutions,
- d. A congenial situation for an entry of new financial institutions and the exit of existing ones,
0. Development of the second market,

- F. Diversification in financial instruments,
- g. Non interference in the activities of banks and financial institutions from the government.

9. Finance Company

The establishment and development of finance companies will be emphasized for (the creation and extension of a Competitive financial environment, Appropriate programmes will be formulated for a convenient supply of financial resources from banks to such financial institutions to meet their short term needs. The development of these institutions in Nepal has not taken place to a desired extent. In this context, the commercial banks should come to the aid of these institutions so that they may be able to mobilise their own medium and long-term resources in the future. The structure of a finance company determines the extent of its activities. Smaller companies of this nature will confine themselves to discounting the commercial bills, bills of exchange and cheques whereas the financing of long term projects will require the assistance of large companies. The Eighth Plan will launch programmes to establish and extend as far as possible such finance companies which may be capable of making arrangements for long term financial resources.

10. Commercial Banks and Financial Institutions

In the present context of the commercial banks being the only prominent institutions in the Nepalese economy to mobilise the collection of scattered monetary savings among the common people, the establishment of financial institutions may provide further assistance in the monetary collection work. These financial institutions will, at the same time, be both competitive with and complementary to commercial banks. In urban sectors with sound financial bases the finance companies will compete with banks, but in areas with relatively scarce financial bases, these companies will play a role complementary to banking activities.

These finance companies classified as non-banking agencies can engage in various activities including providing loans to clients for personal use and are thus provisioned under the Company Act. However, the Nepal Rastra Bank in the capacity of a monetary authority will inspect and supervise their activities in a subtle manner. Special provisions will be made in the early years of the Eighth Plan with regard to the framework of their sources and utilisation of resources in large urban areas and the rural sector.

11. Credit Policy of Commercial Banks

Improving upon the traditional collateral-oriented credit policy the commercial banks have now begun extending loans in accordance with the merit of the project or programme. This policy of programme oriented credit extension will be further encouraged. However, it is equally important to make this kind of credit extension risk-free for the commercial banks. Therefore, an efficient monitoring unit will be formed to supervise whether the extended credit is utilised productively and meaningfully in keeping with the purpose or not. A health report of the project will be prepared and made available. The credit amount applied for by the projects will be disbursed in installment basis.

12. Collateral Arrangements

The practice of extending loan against collateral cannot be stopped immediately. Although the share of such loans in total bank credit extension can be lowered comparatively, providing loans on the collateral of gold and silver or food products has their significance in the economy. The provision of loans on the collateral of a stock of agricultural produce alone can do away with the compulsion of exporting food grains at lower prices. Therefore, the system of accepting the stock of products as collateral for loans needs to be encouraged. However, such loans will be extended only upon ascertaining the quality and quantity of products in the stock and making proper warehousing arrangements for them.

13. Computerization of Commercial Banks

In the initial stage, computerization will entail additional expenditure and training in computer technology will be equally necessary. The replacement of traditional accounting system, auditing and supervision by a new technology may create a psychological impact among employees of their relative significance having been decreased. Therefore, the banks should proceed with computerization on a phased basis by emphasizing on the positive aspects of the computers that they do not make employees redundant but instead enhance the work quality, lighten the employees' operational burden and even create more personnel requirements through the expansion of the banking operation. The Eighth Plan will accordingly orient the banking business towards modern technology.

14. Strengthening of Institutional Intermediaries

The availability of financial resources is a prerequisite for exploiting the possibilities of economic development. To expand the activities of the existing banks and financial institutions, it is necessary to augment the use of new

instruments, to introduce new technology in their operation and to develop a new management system in their organisation. Moreover, it is also equally important to establish additional institutions in keeping with the demand of the economy. Therefore, these aspects will be given special emphasis in the Eighth Plan in order to achieve extensive financial soundness of the economy. Similarly, due attention will be paid to savings and credit management through the development and expansion of financial institutions. This will extend support to the efforts of controlling the rate of inflation. The organisational structures of various institutions will be reconciled with the emergent changes in the economic structure.

15. Establishment of a Rural Bank

During the Eighth Plan period, rural banks will be established with a view to attaining sustainable economic development through an intensive increase in rural economic activities. The activities of these banks will definitely support the programmes aimed at raising the standard of living of the people living in abject poverty below the absolute poverty line and reduce the regional disparities. These banks will operate in the rural sector and extend credit facilities to small and cottage industries, income generating and productive agricultural activities and small scale business and trade. Upon the establishment of these banks, various rural sector programmes such as priority sector credit and small farmer's credit and those of the commercial banks, too, will be conducted through them.

Capital Market

Background

In order to assist in the economic development of the country, it is very essential to develop a healthy capital market. The capital market provides an important base for the development of industry, commerce and the economy. The recent adoptions of liberal economic policies and privatisation programmes by His Majesty's Government with the objective of involving extensive private sector participation in the Eighth Plan is expected to provide ample investment opportunities in the country and will help maximise the demand for capital. In this context, it will be necessary to develop and expand a healthy capital market. Hence, to set up the necessary infra-structure to achieve the aims of the Eighth Plan and to attain speedy economic development, capital market should be considered seriously and given priority.

At present the expansion of capital market in Nepal is severely limited. On the one hand, there is a very limited growth of primary and secondary markets for shares, on the other, special institutions such as merchant banking which help in the execution of the capital market are still in their infancy. In the same manner, well established financial institutions like the provident fund and insurance corporations in the dearth of legal provisions have not been able to participate in the activities of the capital market arena. Investors also do not seem inclined to establish and manage their businesses in the form of public companies. These factors limit the capital market activities to the transaction of limited shares and government treasury bills and securities. Because of these reasons a proper infrastructure development for industrial occupations in the country has not taken place.

To reform the existing situation in order to develop the capital market and to establish it as an institution it has become necessary to activate the role of financial institutions in the capital market. The establishment and development of a stock exchange centre and legal provisions to ensure its smooth functioning are also necessary.

Condition of Capital Market during The Seventh Plan Period*

Even though the national plans of the past did not contain comprehensive plans with regard to the security market, the working policies and programmes of the Security Exchange Centre were fixed for the Seventh Plan period (1985-90). The Centre's strategies and programmes relating to the mobilization of Internal resources necessary in the process of industrialization, together with the institutional development of the private sector were formulated and implemented.

The Seventh Plan aimed to mobilize capital through security market, involve public participation in the ownership of industrial and commercial enterprises, facilitate capital transactions by establishing a security exchange market and promoting professional brokers in the private sector.

As per the stipulated programme for the Seventh Plan period, seventeen companies were targeted to be enlisted in the Centre and made eligible for security transactions. However, thirty companies were enlisted. At the end of the plan, paid-up shares worth Rs. 750 million were enlisted and their market value reached 1,620 million approximately. But the annual transaction of shares could not exceed RS. 30 million and remained minimum in relation to market value. Bonds issued by His Majesty's Government were expected to record transactions worth Rs. 1,600 million but government bond transaction exceeded Rs. 3,000 million.

In the process of collecting the necessary capital for the establishment and expansion of the industrial enterprises, and in giving the ordinary people the opportunity to participate, the Centre was involved in advising on the issuance of capital, its management, sales and warranty assurances. Eighteen companies were enlisted during the plan period. During this period, share capital worth over Rs. 210 million was attracted towards organized investment through the market. It is estimated that by the end of the plan period the number of people investing in shares reached 37,000.

Legal infrastructures were prepared to appoint brokers, conduct transactions, carry out monitoring and control of the development of the security market. In this plan period, the broker's code of conduct and rules of transactions were formulated and presented to His Majesty's Government for approval. During the Seventh Plan period the Centre made special efforts to inform investors, and the general public about the various aspects of the security market, the state of enlisted companies and the market and transaction values etc.

Progress during Fiscal Year 1990/91 and 1991/92

In the first year of the planning holiday period five additional organized institutions were enlisted and during the first six months of the second year four more companies were enlisted. This raised the total number of companies eligible for transactions in the market to 50. Similarly, the market value of enlisted shares went up to Rs.2,102.8 million.

Like in the past, the government treasury bills were predominant among the transactable securities in the market. In the fiscal year 1990/91, government treasury bills worth Rs. 910 million were transacted. In first half of fiscal year 1991/92 transactions worth Rs. 142.5 million were made.

In the primary issue market three institutions were provided consultancy services and one institution was assisted in issuing

shares worth Rs.8.9 million in the fiscal year 1990/91. During the first half of fiscal year 1991/92 three companies were provided consultancy services and the shares of one company were floated to acquire capital.

Though the draft regulations pertaining to the appointment of professional brokers and rules of transactions in the security market were being refined by the concerned authorities, they could not be enforced due to the failure to obtain approval.

Existing Problems in the Capital Market

In the existing financial set-up, in addition to the Security Exchange Centre various Development Banks, Employees' Provident Fund, National Insurance Corporation function as inseparable units in the capital market. But the vacuum in the present financial structure needs to be filled by institutionally developing capital market institutions like investment companies, finance companies, leasing and housing finance in order to create a healthy, competitive financial structure.

Despite past efforts, the capital market is still in its infancy due to the lack of coordination between planning, policy formulation and its implementation. The economy has not been able to derive synergistic benefits due to the division in the activities of units related to the capital market.

Although the number and resources of commercial banks, development banks and other financial units have increased and developed, the acquired resources are not directed towards the capital market. The present financial institutions have been unable to carry out capital market activities such as merchant banking, the award of risk capital and professional brokerage in the security market, on a priority basis. Hire-purchase and other activities are fully lacking. Because of the inability of the established financial sector to the consumer needs, the 'Upahaarl' programmes, the 'Dhukuti' programmes are being run unofficially. In this way, by the emergence of this sector, the resource mobilization and investment of the established sector have been directly affected resulting in a set-back in the financial structure. The industrialization of the country can be made possible only by timely checking the distortions arising out of the situation by the consolidation of the financial aspects together with the well planned development of the capital market.

It is essential to pay attention to the consolidation and development of the capital market in order to fulfil the objectives of the Eighth Plan. Firstly, to realise the aims of the plan; the private sector must fulfil their responsibilities, necessary capital must be supplied to expedite industrial development and it is imperative that the capital market take up an active role supporting economic liberalization. The capital market is also a must for the privatization of public enterprises as well as for the development of the industrial occupation.

Keeping in mind the present state of the capital market and the additional responsibilities entrusted by the plan, capital market planning needs to be formulated in such a manner that it solves the existing problems and challenges given below.

1. The organised financial sector in the country is oriented towards commercial banking. Its five commercial banks occupy more than three fourths of the financial sector's total resources. The capital market being comparatively new and small, the balanced development of the financial sector has not occurred.
2. The present structure of the capital market is also mainly lending oriented. The security market is dominated by bonds and securities issued by His Majesty's Government. Though the practice of floating shares by the organized sector is growing; the dearth of feasible projects and the lack of incentives to enter the capital market have prevented the security market from taking on a more active role. The only industrial bank has not been able to expand its operations due to limitations of resources. organizations, capable of mobilising resources such as the Employees' Provident Fund and Insurance companies limit their resources to government securities, bank deposits and loan extension and hence have not been able to influence institutional securities. The organized sector has not been able to become marketoriented and competitive because of the practice of meeting the financial requirements of the government institutions (which account for a major portion of the organized sector) from the budget.
3. The economy is significantly lacking in a number of institutions and activities which should be playing an active role in the capital market. Because of the insufficiency of institutions such as finance companies, leasing, housing finance, pension fund, hire purchase, merchant banking and investment banking; underwriting, lease, risk capital, dealer, market maker, brokering service and the like are also lacking.

4. The collection of capital by the issue of shares is not yet an established method of fund raising, nor has it been possible to bring out the differentiations in the nature of shares. The practice of speculating with investors' risk-bearing capacity and the expected returns; and issuing government bonds and shares on the basis of the speculations has not yet developed. Similarly, the practice of fulfilling the demand for capital by issuing accumulative, non-accumulative or convertible preference shares, debentures, floating rate bonds, etc. has not been developed. Government and non-government units do not issue shares in market. The tradition of companies accepting public deposits has not developed. In the same way, there is a lack of a unit with requisite policy programme to fix and coordinate the return rates of the capital market.
5. Keeping the well-being of investors in mind, it has become necessary to ensure the effective functioning of services rendered by the Security Exchange Centre; services like the new issues and their sales management, the establishment of secondary market and brokering services. There is the lack of a full-fledged powerful unit to conduct the capital market services on the basis of priority; there is concomitantly the lack of a mechanism which keeps a close watch in order to ensure a healthy controlled development, which declares disclosure standards, which gives policy directives and monitors to ensure a healthy market, and which safeguards the interests of investors and recommends necessary measures and gives right directions for their implementation.
6. Because the Security Exchange Centre is in itself the controller, the market builder and the coordinator of the secondary market; a controlled and coordinated development has not been developed, and this has adversely affected the growth of the capital market. Because the environment in the secondary market is not conducive to the active participation of brokers, the scope of such markets is severely limited. This situation has not inspired the growth of even the primary market. Thus, the capital market, specially the stock market has remained small.
7. At present, there seems to be no unity and coordination among the units related to the capital market. Because the informal exchange of capital takes place in a bigger scale, capital is unavailable for larger projects. Similarly, because the capital market is not open to foreign investors and the circulation of capital and there is a lack of modernization in capital market activities, it has not been possible to direct the capital to come up.

In view of the above-mentioned problems and challenges, the following objectives and programmes have been formulated for the capital market in the Eighth Plan.

Objectives

1. An appropriate capital market will be developed in order to facilitate the accelerated growth of industry, trade, agriculture and other occupations.
2. To develop an effective and efficient institutional structure so that the capital market plays an enhanced and significant role in order to achieve a balanced development in the financial sector.
3. Creating an environment for the maximization of public investment, a significant portion of the private sector investment and the investment amount required by HMG in the form of internal loans within the plan period are to be raised through the issue of shares in the capital market.
4. To encourage the mobilization of financial resources through the official sector by developing a healthy capital market.

Policies

To attain the above mentioned objectives of the Eight Plan, the following policies will be adopted.

1. To issue securities such as shares, bonds and debentures for the mobilisation of funds, to protect and safeguard the rights and well-being of investors in shares, to issue license to centres involved in shares transactions; to follow up and supervise; to bring to public notice statistics related to organised economic and financial institutions; to state the responsibilities of these companies, organisations, the attached legal experts, accountants, etc, and all other activities concerned with capital are to be managed in an efficient manner by setting up a Securities Exchange Board in order to control the stock market.
2. The Security Exchange Centre undertaking the competitive transaction of the shares is to be developed as a non-profit self regulatory organization leading to the establishment of a stock exchange. And in long term, the ownership and the functioning of the stock exchange will be transferred to the brokers of the private sector. An appropriate unit will be formed to generate the necessary additional capital for the expansion of market facilities.
3. In order to encourage the participation of Employees' Provident Fund, Insurance Companies, banks and financial institutions in the capital market, the required amendments to their acts and regulations will be

made. Similarly, the dependence of private and public sector institutions, local units and development banks for medium and long term capital on His Majesty's government will be reduced by issuing different types of shares to collect capital. Thus the development banks will be encouraged to raise capital from the general public.

4. To develop and extend the intermediary system of capital market, the involvement of financial institution will be encouraged in such activities as management of share issuance, guarantees, brokerage and the creation of market as well as in assisting the promotion of established institutions in such activities in the private sector so as to further consolidate primary and secondary markets.
5. Provision will be made to conduct regular training and seminars on various aspects of the security market such as project, company, and share evaluations, transaction of securities and management of the information system for financial entrepreneurs involved in various activities of the capital market.
6. The savings of those not willing to invest in ordinary shares or wishing only minimum risk in investments can be mobilized through many other specialized schemes under the various savings and investment plans by financial institutions. These institutions will function as the authority of issuing shares and also as a guarantor and share investor to assist in developing the primary market. Besides, they will increase market liquidity by getting involved as a broker, market maker and portfolio manager in the secondary market.
7. Necessary amendments will be made in the existing act and rules pertaining to the capital market in accordance with the liberal policies mentioned in the objectives so as to develop the security market. In carrying out these amendments, necessary legal basis will be prepared to regulate unofficial financial programmes and to enable companies to easily issue debentures, acquire deposits and issue negotiable certificates of deposits. Appropriate amendments will also be made in the Company Act as well as other acts in order to protect the well being of small investors.
8. Necessary legal amendments will be made and programmes prepared and implemented so as to gradually pave the way for foreign investors to enter the security market. Similarly, efforts will be made to enhance public interest and faith in companies or institutions by developing a system of credit rating. This will assist companies to mobilize resources on the basis of public trust. The investments to be made in shares and information about the capital market will be widely disseminated and educational programmes will be conducted to promote interest in this field among the general public.
9. Increased capital shares of the Nepal Industrial Development Corporation will be issued in order to make investment possible in large projects. For this the collection of capital from the market will be encouraged.
10. The organizational and legal structures of the existing banks and financial institutions will be reviewed and the capital in the financial sector will be made to flow effectively towards productive projects through the medium of securities.
11. In the course of industrial development, the legal and administrative provisions relating to activities such as the liquidation of professional institutions, their dissolution, buy outs, mergers, fair trade practice, bankruptcy, property rights and transfer of rights will be improved and developed.

Programmes

1. Necessary legal draft and organizational model will be prepared to establish the Security Exchange Board by developing legal and organizational basis to conduct and control the security market. Legal and organizational arrangement will be made to ensure that enlisted companies publish and specify the status of disclosures to the general public and to follow up on the same while issuing shares.
2. The present Security Exchange Centre will be established as a non-profit self regulatory stock exchange institution. The participation of the private sector will be gradually increased so as to develop the physical facilities necessary for stock exchange transactions.
3. The Employees' Provident Fund, insurance companies and other financial institutions will be encouraged to invest in shares, debentures and security bonds in order to attract the organized financial sector resources towards the security market.
4. To develop and expand the intermediary institutions and services of the capital market, the Citizens Investment Fund and other financial institutions will arrange primary issue guarantees and be involved in building up the brokerage market and other activities. There must also be provisions for reforms in the company acts and rules in order to encourage the establishment of financial companies.
5. Provisions will be made to train manpower in order to develop the security market.

6. Arrangements will be made in order to encourage smaller investors to invest their savings in securities. For this various saving programmes will be conducted by the Citizens' Investment Fund or institutions authorized to conduct such schemes so that these savings can be mobilized and invested in the organized sector and financial services will also be provided and profits distributed among the participants. After the relevant Trust Act is developed the institution that controls the security market will permit various trust companies to function.
7. The security market will be utilized for raising medium and long term capital. The policy of providing grants, loans and share capital to the institutions of His Majesty's Government will be reviewed and the practice of issuing shares at competitive values will be encouraged. The tradition of issuing shares in order to acquire necessary means of investment will be further developed in organizations like the Nepal Industrial Development Corporation and the Agriculture Development Bank. The possibilities of adopting the issuance of shares by local urban units in their construction and development works will also be examined.
8. To regularize the financial activities in the informal sector and to channelize them towards the formal sector, the necessary legal basis and institutional set-up will be provided. The necessary unit will be set up to make legal and administrative provisions related to activities like the liquidation of business enterprises, buy outs, mergers, fair trade practices, bankruptcies, property rights and the transfer of these rights.
9. The practice of raising public funds by companies will be promoted and effective legal and institutional provisions will be made to carry out proper monitoring of this activity.
10. The establishment and functioning of companies which involve extensive public participation will be encouraged. The existing system of registering companies separately in the industry and commerce departments will be reformed and a single registration unit established. In the process of these reforms, activities like the conversion of private companies into public ones, the merger of companies and the entry and exit of companies will be made clear, simple and effective. In companies that aim to establish themselves by mobilizing extensive public participation, the financial institutions can, by functioning as founders, adopt the policy of providing share capital and guarantee facilities. To impart dynamism to share transactions in the organized sector, the stock exchange will be operated exploring the feasibility of a Share Depository and Registration Unit.

Public Enterprises and Privatisation

Background

Public enterprises were established as a strong means of development after the Second World War in developing countries. Such enterprises were established in developed countries from the Eighteenth century. However, in the developing countries, constrained with the scarcity of capital and professional skills, the significance of such enterprises was evidently even greater; so in these countries, right from the infrastructural and service areas to the production and even distribution sectors, public enterprises were established. It was believed that the government should play a predominant role in national economic development especially in those developed and developing countries cast in the socialistic pattern. With this view, public enterprises were established in production, distribution and even in business sectors. In Nepal too, the same ideas were behind the emergence of such enterprises.

Public enterprises were established in order to prepare infrastructure services, to produce the required goods in the country and to export, to help in controlling the price situation, to create opportunities for employment, to increase government revenues and to contribute significantly in the national development as well as to assist in the country's economic advancement.

In Nepal, the public enterprises were established in public services, industry, trade, finance and other sectors to create the infrastructure for basic services; and also because the private sector was seen as inefficient in important areas; the capital investment capability was low, and because technical know-how development was still in a very primary stage. After Nepal Bank Limited was established in 1954 as a public enterprise, other such enterprises like Nepal Industrial Development Corporation and Royal Nepal Airlines Corporation also came into being. In the industrial sector also, industries like the Janakpur Cigarette Factory, Birgunj sugar Mill, and Bansbari Leather Shoe Factory were established in 1961. Subsequently, banks, business sector, telecommunication, electricity and water supply in the services sector; cement, bricks, medicines and textiles in the industrial sectors came into existence. In this way, at present sixty two different public enterprises are established in Nepal.

Although the development of public enterprises has achieved the above mentioned aims by creating employment opportunities, increasing production in the country and providing the important basic services; the enterprises have not been functioning in an efficient manner. Despite the long term protection given to these public enterprises they have not been able to achieve financial capability and work efficiency and are still dependent upon government grants. So in order to enhance their efficiency, it has become necessary to think seriously about them.

Upto the fiscal year 1990/91 His Majesty's Government had invested a capital of Rs. 6,303.2 million and loan investment worth Rs. 15,584.2 million on the existing public enterprises. The enterprises which were audited in the fiscal year 1989/90 showed a loss of Rs. 240 million, which increased upto Rs. 1,870 million in the fiscal year 1990/91. From this, it has been evident that public enterprises have become a perpetual financial burden. As the average capacity utilization of these enterprises was only 52 percent and had mostly gone into loss, the capital grants to be given by HMG for functional and transportation expenses gradually increased to Rs. 76,720 million in the fiscal year 1990/91. Since it has become necessary to enhance the working efficiency, to effect managerial reforms and to run these enterprises from the commercial point of view, it is necessary to analyze the nature of these enterprises and to privatize them. Where privatization is not possible, efficiency enhancement programmes must be introduced immediately.

Past Efforts

Keeping in mind the condition of public enterprises, His Majesty's Government has initiated privatization efforts from this decade onwards. Privatization efforts had started even before this. For example, frequent efforts were made to sell the Balaju Textile Industry. However, besides the then lack of political commitment necessary for privatization, the faculty preparatory programme caused the privatization efforts end in a fiasco.

Similarly, in the year 1985, His Majesty's Government had made the decision to privatize one company every one month but implementation in this direction was not made. In the year 1988, HMG had taken the decision to sell 49 percent shares of the Birgunj Sugar Mill. In the same period, efforts to privatize the Himal cement Company also failed. The efforts made by the National Industrial Development Corporation to hand over the shares under its ownership to the private sector could not succeed due to the lack of farsightedness. In 1989, His Majesty's Government decided to privatize 50 percent shares of 30 public enterprises and a privatization committee was also formed. The said committees prepared a draft white paper and programme relating to

privatization and submitted them to His Majesty's Government after which no action was taken in the direction of privatization. Thus, due to incomplete and faulty preparations and the lack of necessary determination, the many efforts at privatization made in the past were unsuccessful.

After the formation of the elected government, HMG decided to privatize three public enterprises in the fiscal year 1991/92. For the formulation of necessary policies relating to privatisation, a privatisation committee was set up under the Ministry of Finance, the Corporation Coordination Division with a special unit for privatization was formed and policies relating to privatization were also brought to public notice. Together with this, the decision to privatise the Harisiddhi Bricks and Tile Factory, the Bansbari Leather Shoe Factory and Bhrikuti Paper Mills was also made public. The above mentioned enterprises were put on sale by calling on open tenders, large scale negotiations were carried on with institutions interested in purchasing and the final eligible purchasers were awarded the deals. Thus, on the basis of the experience gained through the privatisation of these three corporations and keeping with the plan of pursuing the privatisation programme systematically, HMG has started to select other new corporations for privatisation.

The Necessity of Privatization

Although the establishment of public enterprises had greatly assisted in the country's industrial and professional development, and helped to prepare the necessary institutional base, the enterprises themselves could not succeed. To accelerate the pace of national development it has become necessary to increase efficiency in all areas through proper and efficient management. Together with this it has become necessary to bring about changes in the structural framework of the corporations in order to enhance the standard of services rendered by them. Mainly, the following reasons make the privatisation of public enterprises a necessity;

1. By now HMG has made a credit extension of over Rs. 15 billion and capital investments worth Rs.6 billion on various public enterprises, yet the returns from these enterprises are negligible. Even to keep them functioning, the government has had to provide additional annual grants. Thus, most of these enterprises are running in losses.
2. Because the corporations are tied up by various rules and regulations they lack necessary flexibility and, hence, the competitiveness.
3. Because most of the corporations are overstaffed, the expenditures are unduly high and their productivity and competitive capabilities are adversely affected. Therefore, they are not being able to provide expected services.
4. There is a lack of skilled professionals and responsible management in the corporations.
5. It has become necessary to direct the government resources more towards social welfare and other areas than to these enterprises and commercial sectors.

Because of these reasons HMG has adopted the aim of privatising public enterprises. The objectives of privatisation are mainly concerned with the development of industry and business sectors, increment in productivity and efficiency, the mobilisation. of savings and increase in public participation in the commercial field.

Objectives

1. By enhancing the efficiency and competitive ability of corporations, production and productivity will be increased along with the promotion of co-operatives.
2. Programmes to increase efficiency in both types of corporations which are not to be privatised and which are to be privatised in future are to be initiated and reorganization works for better management are to be conducted.

Policies

1. A long-term strategy on privatisation will be devised. Corporations of industrial and business nature will be gradually privatised. All policies and. programmes relating to privatization will be made transparent.
2. The private sector will be allowed to operate projects related to public utility sector like hydroelectricity, drinking water and other public utility services but for the present, public enterprises set up in those areas will continue to operate in the government sector. And, those public enterprises which are considered as important from the public view point will also be operated under the government sector.
3. In the process of privatisation of corporations or in implementing efficiency enhancing programmes the current employees will also be included as far as possible, but if the number of employees/ labourers are more than necessary, they will be removed only after providing adequate compensation.

4. To privatise and to increase the efficiency in corporations, a central unit will be formed. This **unit** will conduct all the works relating to privatisation with the support of concerned ministries.
5. The privatisation of public enterprises will be undertaken in groups such as those being privatised immediately, those to be privatised after a certain period of time, or those to be privatised after restructuring in the long-term. Necessary improvement programmes will be launched for corporations to be privatised later and not to be privatised at all. Corporations will be shut down, should it be difficult to introduce improvement programmes, where privatisation cannot take place and where it is irrelevant to continue operating as a public enterprise.
6. In the process of privatisation, the evaluation will be made together with other necessary preparatory arrangements. Efforts will be made to increase public participation in the ownership as far as possible. In future it will be clearly stated whether a reduction in employees/labourers is possible or not, and in the case of having to reduce them, how much compensation they will be given.
7. Legal basis will be prepared for the privatisation of corporations, considering their structure. Those corporations, established through special legal provisions will be handed over through the company laws and privatised.
8. Public awareness programmes on privatization will also be launched. In the process of privatization, arrangements will also be made to involve the participation of employees and labourers.
9. In order to increase the efficiency of public enterprises which are not going to be privatised or which are going to be privatised in future; programmes related to organizational changes, financial and managerial reforms and top level managerial appointments will be conducted in order to **create a** responsible management.

Programme Relating to Privatisation

1. On the basis of long term strategies relating to privatisation, the public enterprises to be privatised will be selected. In selecting the corporations to be privatised, priority will be given to the factors such as the public importance of the corporation, financial capacity, the need to increase the market guarantee factor, the need of special corporation and the future potential. Thus, corporations will be categorized into groups like those to be immediately privatised, those to be privatized on a medium term basis and those to be privatized on a long term basis or after restructuring.
2. As per the long term policy in the Eighth Plan; the corporations to be privatized will be selected and the necessary preparations and annual programmes will be formulated. At the same time, necessary reform programmes will be conducted for other corporations that are not going to be privatised. Those corporations, difficult to be reformed and where privatisation is not feasible, and which lack sufficient ground to function as corporations will be closed down.
3. While privatising, the nature and problems of corporations will be studied extensively and it will be decided whether they are to be fully sold, the government role is to be minimized by selling shares, or only the management is to be handed over. Along with this, appropriate evaluation and necessary preparatory arrangements will be completed. Such evaluation will be used as a basis for the corporations to be privatised.
4. Policy and programmes relating to the replacement, retraining and necessary compensation to be given to employees and labourers will be clarified and while privatizing these provisions will be implemented. Whether employees and labourers have to be reduced in future, and in the case of having to reduce them how much compensation can be given will be clearly specified.
5. The method of privatisation will be decided upon the needs of each corporations. While making decisions in this manner, the economic condition of the corporation, the market factor, employment number and investment potential will be considered.
6. If a corporation is not possible to privatize in its present state, then the assets of such corporation may be sold or given on lease. And if it is not possible, then it will be closed down.
7. A legal basis will be prepared for the privatization according to the needs and structure of the corporations. Corporations set up through special legal provision will be handed over under the company law and privatized.
8. Public awareness programmes related to privatisation will be conducted in a massive scale and their utility will be brought to public notice. The main aim of privatization is to enhance the efficiency of corporations for the speedy economic development of the country and to bring the public property under the management of the public, which will be properly publicized and broadcasted.

9. A privatization fund is to be set up by appropriating a certain specified amount from privatised corporations. Such funds will be used for future privatization purposes as well as to provide necessary compensations to employees and labourers.
10. In order to enable the employees and labourers to participate in the process of privatisation a certain share may be allocated for them. In case the employees and labourers do not accept the share, it will be publicly, or by other means sold and distributed. Provisions will be made for selling such share of the property to employees/labourers in installments or against deferred payment.
11. Large public enterprises can also be privatised on the basis of deferred payment. In such cases, the form of instalments and the initial instalment should also be clearly specified initially.
12. To successfully implement privatisation programmes, a privatisation commission as well as a committee of experts on privatisation will be formed and under them privatisation works will be completed.

In relation to Improvement of Efficiency in Public Enterprises which will not be Privatised or those which will be Privatised in the Future:

1. As the important service sectors such as electricity, water and communications can provide more services in the form of public enterprises functioning under HMG, for the time being, efficiency enhancement programmes will be conducted in these types of corporations. Public participation in corporation sectors will be increased by privatizing many corporations of a commercial nature.
2. Public enterprises to be run by HMG will conduct programmes to increase efficiency in productivity, to make maximum use of available capabilities, to bring about reforms in management, to reduce expenditure and investment in unproductive and less beneficial sectors, and to organise the personnel systems. While conducting such programmes the professional management will also be involved. Reformistic action will be taken after a diagnostic studies of the present state of these enterprises.
31. To increase the efficiency of the corporations, expenditures will be deducted and to increase productivity by adoption of the cost-benefit approach, etc. will be implemented. By this, the corporations will be made self sufficient and the grants to these corporations will be reduced gradually.
4. In order to increase productivity, programmes will be conducted to fully mobilize capacity utilization, to gradually use the appropriate technology, to bring about reforms in training and management, and to establish an appropriate pattern of working style. Management committees will be formed comprising mainly efficient and skilled persons representing the private sector or professional groups. A conducive environment will also be created to run the corporations in a well organised manner by appointing the chairman and the general manager on professional merit basis.
5. To create a competitive environment in areas where public enterprises enjoying monopoly, private sector will be given to operate similar units gradually.
6. Unnecessary and unproductive expenditures and investments will be cut down and expenditure control measures will be put into practice. The management will be provided with greater autonomy to run public enterprises. Government intervention in fixing prices will cease gradually.
7. An appropriate system of reward and punishment on the basis of efficiency enhancement works and their results will be introduced in the corporations. To make such a system function, its proper implementation will be encouraged. The management will be made responsible to ensure that work is carried out properly.
8. If necessary, public enterprises will be reorganized in the following manner:
 - a. By floating the necessary capital.
 - b. By reevaluating assets and loans.
 - c. By writing off the accumulated losses and creating new capital structure.
 - d. By capitalizing the loans of the HMG
 - e. By selling or leasing out unnecessary and useless property.
 - L. By dividing the larger corporations in proper size and reorganizing them.
 - Y. By merging two or more corporations to function in a more successful manner, if deemed proper.
 - h. By providing management contracts or memorandum of understanding to increase the efficiency of the selected corporations.
 - i. By removing unnecessary manpower providing them with appropriate compensation upon conducting necessary studies while reorganizing the corporations.

- j. By making efforts to improve the efficiency of corporations with the involvement of efficient and capable managers, besides the general manager, in other top management posts as required.
- k. By making this kind of appointment also *through* the lateral entry system.
- 1. Reorganising the Working committees by appointing professional and efficient directors in smaller corporations working committees.

Institutional Arrangements

The implementation and monitoring works relating to the strengthening of corporations, competence enhancement, new investment and the policy of privatization will be carried out by the Corporations Coordination Division of the Ministry of Finance, HMG, concerned ministries and corporations as per the guidelines of the Privatization Commission or the Experts committee on privatization.

Development Administration

Background

An efficient administrative machinery is necessary for the timely completion of the nation's development and construction works in order to respond to the growing desire for development and to avail the fruits of development to every household of the people. In order to incorporate and coordinate the technological advances in development and construction activities in this fast shrinking world, the administrative machinery must be strengthened in order to make it capable, powerful, prompt efficient as well as effective in the execution of its functions. For this, the administrative and technological capabilities in the upper level should be enhanced. It is well known that it will be difficult to implement the development and construction works effectively as desired in the absence of coordination between the needs of the administrative machinery and development and construction works. In this context, it has become very essential to reform the administrative machinery in accordance with the time.

Although the slogan of calling for the effectiveness and reforms in administration was given from the very beginning of the development plan, the complaint that desired and impressive progress in this direction was not achieved holds ground in its own place.

It is clear that the implementation of the country's development plan according to its target has not been possible because, from the economic point of view, the administrative machinery is burdensome and unproductive; in its organizational aspects, difficult to manage and control; and from the service view-point, more government - oriented rather than people - oriented. Further, the absence of transparency and permanence with regard to the proper use of civil servants in the country's development works through training, proper placement, transfers, promotions, job security, and career development opportunities has resulted in the loss of public confidence in and the emergence of an inefficient administration. The policy of implementing the recommendations of the administration reform commission will be gradually adopted with timely reforms in order to effect immediate reforms in a sick administration and to make it service oriented. The image of public administration is to be made neutral, fearless, impartial and it is to be rendered small and active.

Giving priority to make the development administration strong and achievement oriented in the Eighth Plan period, the existing government administration units will be reformed in their organizational set-up functions, duties and system of functioning, administrative procedures and acts and rules pertaining to them. In order to ensure a high morale among civil servants, career development opportunity and economic and other facilities will also be improved by developing a transparent system of assessing work efficiency and responsibility level and by institutionalizing a system of reward and punishment on the basis of the same in order to review all aspects of administration so that an efficient, strong and effective administrative machinery may be prepared.

It is necessary to reform the procedure of formulating plans and* programmes in order to bring dynamism in development administration. In this process, legal rights will be devolved to villages, municipalities and district development committees to undertake responsibilities such as the formulation, implementation and evaluation of local level plans which aim to mobilise and involve local means and resources and to enhance local participation for local development works. Based on local requirements, periodic and. annual plans of villages, towns and districts will be, made by the local units themselves, by involving the maximum participation of people in the development process. For this, the centre will provide the necessary technology and technical assistance as well as help to strengthen the management. This will help to bring an end to the practice of demanding and approving adhoc programmes and budgets. The formulation and implementation of central level plans will be exclusively based on a programme oriented budget system for which the feasibility study, environmental impact assessment, benefit/cost ratio, work schedule, manpower management, provision of review and coordination between the centre and local units or its absence will provide the basis.

The monitoring and evaluation of central level plans will be done within a specified time on a regular basis by consolidating and increasing the efficiency of the central organization's planning and monitoring unit. The decision making process will be revamped by clearly defining the rights and responsibilities of all levels required for conducting administration at various levels and for formulating and implementing development and construction works. Provision will also be made to ensure the rights of all levels. The practice of irrational transfers of civil servants involved in the implementation of development planning will be brought to an end. Keeping in view the effect on the projects due to delays in hand-over, take-over and audit clearance works, the work performance of the concerned civil servants will be linked to the evaluation process in order to ensure the timely execution of such works.

The current development administration is uneconomical; there prevails a privilege seeking tendency and flimsy financial discipline. In this context, on the one hand, efforts will be made to embrace austerity measures by enhancing the morale of civil servants, and on the other, transparent rules and regulations with reference to reward and punishment will be made to ensure strict enforcement of financial discipline. Legal measures to curb corruption will be reinforced. As development activities are more effectively conducted by non-government and the private sectors than through government efforts, the Eighth Plan will aim at creating an atmosphere conducive to the maximum participation of non governmental organizations in development activities by increasing their skills, knowledge and management capacities.

The work force of civil servants is increasing with the creation of new posts in various government organizations. Nonetheless, due to the lack of accountability, they are being evidently underutilized. This has been attributed to the absence of job description, the absence of working standard and levels of responsibility among various ranks. Job description of each and every rank or grade will be prepared and implemented and if necessary, the policy of cutting down the number of underutilised posts will also be followed. Another important aspect of public administration is the simplification of the decision making process. For this, the delegation of authority and the decentralisation of power is essential. Therefore special emphasis will be given-by the central level to handover the responsibility and to delegate authority at the implementing stage.

The important aspects of development administration are to complete the construction and development works in a coordinated manner, to develop the necessary capabilities and to increase the productivity of the civil servants. In order to achieve these qualities, physical, psychological, economic, social and legal provisions have to be strengthened. Therefore, in the Eighth Plan period matters pertaining to the creation of posts, transfers, training, work performance, evaluation, promotions, salaries and allowances and other facilities as well as matters concerned with level, rank and service have been clearly stated in order to build prestigious image of the public administration. According to the recommendations of the pay commission, periodic revisions will be made in salaries and allowances, and legal discrepancies in relation to civil service will be removed through democratic and liberal act and rules.

In order to remove the delay and slackness, decisions motivated by vested interest, irregularities and corruptions from the administrative sector, clear legal provisions will be made and strictly enforced. All units involved in curbing corruption will be strengthened. Considering the compulsion to remain in a single post for years in the civil service due to the absence of career development opportunities, steps will be taken to provide these opportunities so that the competence and morale does not get reduced. Lower level civil servants managing their livelihood within their limited incomes will be provided service opportunities near their home districts. Special training will be provided to civil servants attached to local units in order to make them more service oriented, honest and dutiful.

In order to make development administration efficient, the decision making process relating to financial matters such as contract deals, procurement and supply, giving priorities to national products, the process of acquisition of land and technical dealings will be simplified by entrusting the responsibility to the concerned responsible officials. Bookkeeping and accounting systems will be gradually improved. The management of accounting system will be strengthened. The

practice of allocating the budget at the centre for the works to be done in the Villages and districts will be abolished and the system of allocating budgets according to the principles of decentralization will be strengthened. Keeping in view the problems of accumulating irregularities arising out of the failure to carry out timely audits, a system will be developed wherein civil servants accountable for expenditures, will be made responsible to ensure that timely audit are conducted. The practicalities of implementing foreign aided projects will be considered prior to agreement, and efforts will be made to discourage obstruction in matters relating to the release of funds and expenditures after the agreement has been reached.

The constitution of the Kingdom of Nepal, 1990, has stipulated on matters relating to departmental punishments that the proposed punishment against any non-gazetted civil servants also needs prior approval of the Public Service Commission. It has thus, ensured legal protection to civil servants. Due to this, the responsibilities of the Public Service Commission have increased. The administration can be made competent only by selecting appropriate people by bringing about timely reforms in the process of assessing the suitability, the bases for promotions and the examination system and procedures concerning civil servants. The Public Service Commission will be provided necessary assistance in order to strengthen these aspects. A policy will be adopted to strengthen the management of the Public Service Commission by improving its physical condition. The practice of the recruitment of employees on bases other than the principles stated by the public service commission will be made punishable.

The most powerful means of rendering the administration efficient are the enhancement of knowledge and skill which can, only be attained through training. Reforms are equally needed in training policies as well as procedures. The development of curriculum, training material, training techniques, mechanical techniques, efficient instructors and coordination among the training casetres, are the pre-requisites of qualitative training. The training programmes will be made effective by establishing upon conducting a relevant study on umbrella organisation, if necessary, to maintain the quality of and balance as well as coordination among training programmes. These training casetres will be encouraged to help increase the management capabilities of non government organizations.

In the Eighth Plan the structure of the central organizations will be made more dynamic and a policy will be embraced wherein central units will be given active responsibilities in policy making, in reducing the levels of decision making in formulating perspective plans and in supervision and monitoring activities. The system of carrying out timely supervision and regular monitoring of programmes conducted by individual organizations will be developed, the final responsibility for which will lie with the secretaries of miniseries. The concerned secretary will also bear the responsibilities; of co-ordinating the central level programmes to avoid repetition and maintaining inter-ministerial coordination. A system will also be established wherein regular supervisions and follow-ups will be used to identify adverse effects faced by the project due to incorrect technical studies and action will be taken against those responsible.

The following policies will be adopted to fulfil the above objectives:

1. Necessary steps will be taken to develop an efficient and dynamic administration by gradually implementing the recommendations of Administrative Reforms Commission and by effecting the necessary restructuring at central, regional and district level administrative organization in order to make the administration more capable and service-oriented.
2. The duties and responsibilities at various levels will be clearly defined and the decision, making process will be streamlined in keeping with HMG's principles of decentralization. Special emphasis will be laid on the delegation of responsibility and authority from the centre to the level of implementation.
3. Necessary changes will be made in the conditions and requirements for postings, transfers, training and work evaluation, in order to enhance performance and to raise the productivity of employees.
4. The works to be carried out by government agencies in the various sectors will be fixed, and accordingly the organizational structure and employee numbers will be determined. Along with this, various services will be set up within the civil service and groups will be formed as necessary.
5. Areas of training in many aspects of public administration to be conducted by various agencies will be specified on the basis of objectives, targets and policies. The scope of training to be imparted by training institutes also will be defined, and their proto-types will be made from time to time, to avoid duplication and increase the efficiency of training programmes so as to coordinate all training organizations under a single umbrella as far as possible. As the new management will have to make use of increased scientific technology, the knowledge and skill needed for this will be imparted in the trainings which are to be conducted on a large scale.
6. Undemocratic anomalies in prevailing laws will be corrected and timely reforms introduced to make the civil service democratic and dynamic. The role of the administrative court will be made more effective.
7. The system of classification of services and employees will be reviewed and necessary amendments made.
8. Steps will be taken to make the system of reward and punishment more effective, to relate promotion to performance and ability and to link training to job responsibility and career development.
9. Necessary reforms will be made in the existing financial rules and regulations in order to make efficient use of resources available with development projects. The system of regular monitoring and evaluating development plans and programmes will be institutionalized. Emphasis will be given on improvement of the technical management aspect of the project.
10. In order to make funds readily available at the implementation site, provision will be made to ensure that the authority to spend will automatically be delegated to the concerned office as soon as the budget is passed by parliament. Steps will be taken to reduce irregularities and to make programme budget more effective. To increase revenue collection the revenue administration will undergo various reforms and related training programmes will be extended. In the case of development programmes being affected by the freeze of the released fund at the end of the fiscal year, alternative solution will be explored so that the programme is not affected.

11. Basic facilities will be provided in order to make the Public Service Commission and the Nepal Administrative Staff College efficient. A high level manpower coordination committee comprising the representatives of the ministries of General Administration, Education and Culture, the Public Service Commission and universities will be formed and put into action effectively.
12. The management skill will be raised at local level offices. Special attention will be paid to the quality of services received by the general public.
13. Special measures will be strictly enforced to control corruption.
14. With a view to gradually implementing the recommendations made by the high level Administrative Reform Commission and to make improvements in time an arrangement will be made for monitoring, supervision and evaluation through the high level administrative reform monitoring unit.

Science and Technology

Science and technology play a very important role in the allround development of the country. The economic development of the nation depends largely on the state of development of science and technology and their proper use. Past experience has made it clear that it will be difficult to increase the pace of development and raise the people's standard of living without utilising appropriate technologies. Efforts seem to have been made in the past to ensure the development of science and technology, but not to the extent warranted by nation. It is only natural that in a predominantly rural nation, the development of the rural sector should play an important role in national development. The kind of science and technology required for expediting the rural upliftment still remains to be developed. In fact, it has become necessary to develop science and technology in a manner that facilitates the development of local skills and technology and allows the mobilisation of available natural resources.

The National Science and Technology Council was established in 1975 with the aim of conducting various programmes in the field of science and technology in an organised way, linking it with the national development process. Likewise, the Royal Nepal Academy for Science and Technology was established in 1982 in order to further expedite the development of the science and technology sector. Government and educational institutions, especially Tribhuvan University, have been involved in the development and expansion of science and technology. Research studies are also being carried out in various government research laboratories mostly in the fields of agriculture, botany, mining, and pharmacy. The National Agriculture Research Council has been conducting research on various aspects of agriculture. Similarly, the National Herbarium and Botanical Laboratory, Forestry Research Centre, the Royal Drugs Laboratories, The Central Food Research Laboratory and others have also been engaged in the research on technology development.

In addition, basic research is also being carried out in the fields of forestry, horticulture, agriculture, engineering and medicine, in the various institutions of Tribhuvan University.

The main field of work of the Research Centre for Applied Science and Technology of Tribhuvan University has been the development of science and technology. The centre has undertaken research mainly on various subjects like solar energy, construction materials and natural products.

As scientists and technicians play a major role in the development of science and technology, efforts are being made to gradually produce such manpower within the country itself. High and mid-level scientific and technological education and training programmes are being conducted to produce technical manpower in Tribhuvan University's various educational units such as the Institute of Engineering, Institute of Forestry, Institute of Agriculture and Animal Science, Institute of Medicine and the

Institute of Science and Technology. Low level professional manpower is likewise being produced by His Majesty's Government's vocational schools. But the manpower produced by these institutions are grossly inadequate to meet the country's requirements. Moreover, this manpower still needs to be qualitatively standardised.

An analysis of the achievements made in this field in the past two or three decades will clearly reveal the obstacles faced by science and technology. There is an obvious lack of coordination in the activities of the various units that were existing or were created for the development of science and technology. In addition, another major concern has been the inability of scientific and technological development to be geared towards increasing production and productivity. The necessary contact between the researcher and the user seems to be lacking. Similarly, the results of research have not been able to be brought into practice in a sizeable scale. There is neither sufficient import of appropriate foreign technology nor is there any attention being paid towards the development of traditional indigenous technologies. Also, the economy has not been able to benefit from the available technology due to the lack of wide dissemination. Against this background, the Eighth Plan objectives and policies with regard to science and technology sector have been laid down.

Objectives

The objectives for the development of science and technology in the Eighth Plan are as follows:

- (a) To develop science and technology in a way that they could support the all round development of the nation.
- (b) To support rural development sectors such as agriculture, cottage and small scale industries by enhancing the scientific and technological capabilities available in the country.

- (c) To encourage the import of foreign technologies that have a direct bearing on the country's economic development.

Policies

The policies that will be adopted to realise the above mentioned objectives are as follows:

1. To promote the use of appropriate technology for the development of economic sectors such as agriculture, industry, power, transport and communications as well as for the rural development.
2. In the context of research works being carried out in various subjects and areas, priority will be given to research works geared soiving the country's problems. Greater attention will be given to adaptive research in the development of cereal crops, horticulture, livestock as well as rural industries and energy.
3. Emphasis will be laid on scientific research and technological development that assist in the mobilisation of the country's natural resources. Encouragement will also be given to the augmentation of environment and bio-diversity by conducting special research peculiar to Nepal such as snow-hydrology, drought and cold resistant crops, forest trees, etc.
4. The import of appropriate technologies from various developed and developing countries will be beneficial for the speedy development of the country. Hence, the transfer of such technologies will be encouraged through government, non-governmental. and private sectors.
5. Investment from the private sector is a prerequisite for the adoption and transfer of any technology. As the private sector can expedite the process of technology transfer, these activities will be intensified by involving private agencies. In this context, needed licenses and tariff arrangements will be made to attract foreign investments in viable areas.
6. Appropriate technology development process will be expanded through the promotion of adaptive research with the assistance of the sponsors of technology and capital investors. Arrangements will be made to institutionalise the system of issuing patents and copyright to encourage the private sector in the development and use of technologies in the Nepalecse environment.
7. Necessary coordination will be maintained among various government, non-government and private agencies involved in the enhancement of science and technology. A government agency will be instituted to consolidate these different units and to coordinate educational and research work on development of science and technology in an effective manner.
8. Qualitative and quantitative improvements will be made in the production of scientific and technological manpower for the all-round national development. In this context, studies, research and training programmes will be promoted through universities, academies and non-government and private institutions, to develop science and technology in the country. Concrete steps will be taken to give needed authority to such research institutions.
9. The extent to which the accomplishments made in science and technology are availed to various agencies involved in development works is quite limited. Therefore, the achievements made in this field will be widely published and disseminated. This will help to make the general public aware of the benefits and uses of science and technology, and thus help increase their usage. Libraries and information centres will also be mobilised in this task.
10. Special attention will be given to the development of traditional indigenouse technology. In this regard, the improvement, development and fine tuning of existing technologies in the rural areas will be encouraged.
11. Non-governmental and private institutions will be mobilised to the maximum in technology dissemination and its effective use.
12. In order to lend support to economic development through the utilisation of research results in the science and technology sector, many research establishments have already been set up. Some of these units have not been able to achieve their targets and make desired contribution to the country's development in want of effective leadership and coordination. The work efficiency of such government and private units will be enhanced and the research programmes will be conducted as per the country's needs. Necessary arrangements will be made to mobilise internal resources as well as the external assistance from international organisations and institutions in this endeavour.

Programmes

In line with the above mentioned objectives and policies, the following programmes will be launched during the Eighth Plan period:

1. management and expansion of the infrastructure necessary to enhance the potentials of scientific research and development.
2. promotion of the technology transfer and replication.
3. production of quality work force.
4. publicity and dissemination of technology

1. Management and expansion of the infrastructure necessary to enhance the potentials of scientific research and development.

While Tribhuvan University, HMGN and other non-government agencies are involved in science and technology development, research and development works are carried out by Royal Nepal Academy of Science and Technology, Practical Science and Technology Research Centre, Nepal Agriculture Research Council, Institute of Engineering, Institute of Forestry, etc.

Research and development works are also being carried out to some extent in the private sector. Hence, the programmes which build the capacity of the research and technology development units in the government, non-government and private agencies will be implemented. Arrangements will be made to create a conducive environment for executing the programmes by these institutions. Steps will also be taken for providing research equipment, materials and laboratories necessary for these agencies.

The activities that help to increase the capability of the government, non-government and private agencies in developing suitable technology for activities like construction materials production, tunnel construction and other construction works will be carried out.

2. Promotion of Technology Transfer and Replication

Technologies helpful in developing agriculture, industry, transport, communication and construction will be identified, and if necessary, permission will be given to import them. The concerned government, private and non-government organizations and institutions will be encouraged to undertake this task.

3. Quality Work-force Production

The production of technical manpower required for scientific research and technological development, especially at the high and mid-levels, is insufficient in relation to the demand. To gradually rectify such an imbalance, high and mid-level technical manpower will be produced from the local educational, technical and research institutions. A review of the structure of the available technical manpower indicates that there are discrepancies in the ratio of high, middle and low level technicians in many areas. Hence, while formulating programmes, special attention will be given to minimise such discrepancies. Provision will be made to educate and train the manpower by sending them abroad in subjects which can not be taught locally.

4. Publicity and Dissemination of Science and Technology

Science and technologies that have bearings on the social and economic sectors and that directly or indirectly assist development efforts will be extensively disseminated. In order to inculcate interest in science and technology from the lowest level of education relevant educational materials will be included with priority in the school curricula. Public communication media like television, radio, newspapers and the like will also be used to disseminate the effective uses of applied science and technology. Together with this, public and academic libraries will also be used for this purpose.

Necessary resources for the above mentioned programmes will be arranged while formulating programmes for the related sectors.

Implementation Arrangements

Action will be taken to institute a departmental level unit in the government to implement the mentioned objectives, policies and programmes of the science and technology sector. Similarly, several local and foreign institutions at the public and private sector involved in scientific and technological research will be extensively mobilised to get concrete contributions from them.

Women in Development

Background

According to the preliminary result of census of 1991, the population of women in the country was about 9,200,000., that is to say, more than fifty percent of the total population. Nepalese women have been unable to make, the expected contribution in development activities due to illiteracy, poor health, poverty and a traditionally conservative attitude towards them. Financial resources and opportunities like property and income-generating employment are far from the reach of the Nepali womenfolk. In comparison to men, the average life span of Nepali women is 53 years (for men-56 years) , the maternal mortality rate is 850 per 100,000 and the literacy rate for women is 25 percent (whereas for men- it is 55 percent) . As long as women, who constitute more than 50 percent of the total population are not fully involved in the upliftment activities of the nation, the economic development of the country will not be possible. Thus the government is committed to make possible the equal and meaningful participation of women in the development process by improving their economic and social conditions. special provisions have been made in the constitution of the Kingdom of Nepal - 1991 to make women equal from the legal point of view and to ensure their economic and social development.

A national action plan was prepared for the development of Women in accordance with the declaration of the International Year of the women 1975 A.D. For the development of women, this action' plan has specified the areas of education, health, employment, agriculture, cooperatives and legal matters (where women can participate) and stated the basic objectives and policy measures for the development of women. Keeping in view the importance of women's participation in national development for the first time in the Sixth Plan, policies to increase the participation of women in national development were laid down. Similarly, the Seventh Plan also adopted national level policy and working policy for women development to increase their participation by raising their social and economic status.

The programmes which were launched for the development of women in the past have not been able to raise the social and economic levels of women as desired. In the efforts made for the development of women, certain distinct problems such as the inadequacy of the concerned programme, the lack of institutions for the effective implementation and coordination of areawise policies, and the absence of the analysis of Women's participation in development process have been observed.

To make women participate in the main stream of development, to increase their involvement in every sector of development, to improve their social, economic, academic, political and legal status, to provide productive employment opportunities by increasing their efficiency through appropriate knowledge and skills, to create the appropriate environment and infrastructures so that they are provided with the opportunity to play a decisive role from the local to the national level, the following policies are adopted:

Policies

1. Special programmes will be conducted to increase the involvement of female students in primary, secondary and adult education. In such programmes, the policy of increasing the admissions of female students; of reducing drop-out before completion; of making it compulsory to appoint a female teacher in a primary school and gradually in the secondary level also in future will be adopted. In the field of adult and informal

education, informal and job-oriented education like the 'chelibeti' programme will be conducted.

General and technical education will be made available to female students who are unable to acquire higher education or devoid of the opportunity to do SO. A fixed quota will be set aside in order to encourage female students to join higher technical education. Arrangements will be made to allocate a certain percentage of national and international scholarships for girl students and women.

2. In the context of high maternal and infant mortality rates, programmes targeted for women such as safe motherhood, extension of immunization, and services related to family planning which aim to improve the health standards of women, will be carried out. These programmes will be extended to the rural sectors through maternal and child workers and female community women health volunteers. Traditional birth attendants working at the local level will be provided appropriate training and mobilised. Emphasis will be given to the increased participation of women in the development of high level technical manpower in the health sector. Keeping in mind the important contributions made by non governmental agencies in providing health services to rural women, various programmes will be conducted through the active participation of organizations under the social Services National Coordination Council and women's associations.

Considering the role of women in controlling population growth, stress will be laid on family planning information, delivery of services and the use of semipermanent devices for birth spacing. Beds will be increased for maternity service in primary health centres district, zonal and regional hospitals.

3. More women farmers will be encouraged to participate in agriculture development programmes such as trainings on improved fertilizers, seeds, and dissemination trainings. The supporting services such as credit market and other facilities necessary for agricultural development will be targeted to women farmers, and arrangements will be made to provide them with the necessary training and physical and financial means. Provision will be made to guarantee trainings and jobs in order to increase mid and high level women agricultural technical work force.
4. Women will also be involved in greater numbers in the field of forest and soil conservation. Women will be encouraged to actively participate in community afforestation programmes in order to solve environmental problems by protecting and developing forest resources. Training and dissemination programmes will be conducted to increase awareness among women about the multiple benefits of proper management of forest resources. Women's participation will also be increased in production and processing of herbs, fodder, etc.
5. As cooperative institutions can play an important role in the development of rural women, agricultural, cottage and rural industry programmes as well as cooperative consumer stores and saving programmes will be encouraged through cooperatives. Women participation will be increased in various cooperative trainings.
6. In order to improve the socio-economic status of women by increasing their participation in the industrial sector, provisions will be made to provide such facilities as skill-oriented trainings, raw materials and industrial management training, and easy and subsidized credit. Based on market feasibility and utilisation of local skills, arrangements will be made to establish and manage the market of cottage and rural industries. Such industries will be given a position in the industrial estates. Women's

participation will be increased in the implementation and management of industries. Trainings to enhance leadership, management, entrepreneurship and skill development, that increase women's participation in industry, commerce and tourism sectors, will be provided.

7. Emphasis will be laid on the extension of the programmes such as Production Credit for Rural Women Programme and Small Women Farmers' Development Programmes in order to improve the economic condition of the rural women.
8. Encouraging provisions will be made in the policy and regulations in order to promote the involvement of the women working in the government and non-government Service sector in the policy making process to a greater extent.
9. Provision will be made to provide institutional support and financial assistance to ensure the management of women and to provide entrepreneurship training and ensure its proper utilization. The welfare of minorities and backward classes will also be considered.
10. Women development activities which aim to increase awareness, organize public gatherings and mobilise necessary resources for assistance, launched by various women's organizations and other institutions directly involved in the welfare and protection of women will be made effective.
11. Necessary measures will be taken to amend laws and acts that hinder women's development. Legal services and training will be provided to provide legal information to rural women.
12. Women's participation will be encouraged in the formulation and implementation of rural infrastructure programmes in irrigation, drinking water and road construction. For this, women's participation will be made compulsory in users' committees.
13. Technologies that help to save time in the collection of firewood, fodder and water and other domestic activities will be extended to the rural sector.
14. In order to promote the meaningful participation of women in development programmes, appropriate organizational structure will be established for coordination and monitoring activities. The Planning Commission will issue guidelines to the ministries for formulating sector-wise programmes for women's development.

Child Development

Children are the future citizens of the nation and it is the responsibility of the government to create an environment that will be conducive in making them active and capable citizens. According to the population census report of 1981, the population of children under the age of 14 was 6,211,972 whereas the preliminary report of the population census of 1991 indicates that the population of children has reached 7.9 million and constitutes 42.7 percent of the total population. Nepalese children suffer from malnutrition, disease and illiteracy. 45,000 children still die of gastro-intestinal illnesses every year, 50 percent of the children are suffering from malnutrition and only 27 percent of the children are found to be completing primary education. Because the majority of the rural population remains poor, children have become a part of the labour force in order to contribute to the family income. Together with this, the problems pertaining to the disabled, orphaned, addicted and begging children are equally serious.

Though some improvements have been brought about in the fields of child education and health standards by the policy adopted upto the Seventh Plan; the expected results have not been achieved yet. In conducting programmes related to children, problems arise due to the lack of inter-sectoral coordination, reliable institution reliable statistics.

Since 1990, there has been a general awakening at the international and national -levels for the protection, and development of children. Nepal is also committed to the resolutions passed by the SAARC Child Conference (1986 A.D.) and the World Child Summit Conference 1990 A.D. for the protection, security and development of children. As per this commitment, the targets upto 2000 A.D. in the various aspects of child development were decided and the National Child Development Action Plan was formulated. Together with this, necessary provision has also been made in the constitution of the Kingdom of Nepal (1991) to prevent the exploitation of children and to protect their rights and benefits. The integrated child act-1991 has also been passed.

The policy adopted in the Eighth Plan for child development is based on the Children and Development Action Plan for the 1990s which was prepared as per the commitment to the World Summit for Children. With the objectives of making the necessary services and facilities available for the physical and mental development of children from the prenatal and nascent stage to their growing up period; preparing patriotic, disciplined, well-principled and capable citizens; cultivating good habits from the very childhood; protecting the rights and benefits of children and enabling parents to rear children by increasing their income level; the following Children and development policy has been included in the Eighth Plan:

1. Protected maternity programme for the care of children from the womb onwards will be extended to the village level. From the time of conception, periodic health check-ups, treatment and protective maternity services will be made available.
2. To reduce the infant and child mortality rate according to the target of the Eighth Plan, extended programmes will be launched to carry out immunisation and to control gastro-enteritis and respiratory diseases. Together with this, general awareness of child health will be enhanced through the medium of health education.
3. To improve the general and minimum status of nutrition programmes will be implemented maintaining inter-coordination among the food, health and education sectors. By creating employment opportunity, the supply of household food will be increased. Protein energy and the treatment of diseases related to micro-malnutrition will be made available from sub-health post level. The knowledge pertaining to nutritional education will be imparted from the level of primary education onwards.
4. For the expansion of curative services for child health arrangements will be made to provide more beds and specialist services in Kanti Children's Hospital. on the basis of population, arrangements will also be made to provide beds and specialist in zonal and district hospitals.
5. Keeping in mind the advantageous effects of a small family on the development of children, programme's that encourage the concept of a small family will be conducted through the medium of family planning services.
6. With the participation of the private sector, non government institutions and local units, child-care centres and pre-primary schools will be established for children in the age group 0-5.
7. Free primary education will be provided to children of primary age. And, in this context various measures are being taken up to ensure the quantitative and qualitative improvements, such as: increasing the enrolment of girl students, giving education opportunities to those who have been deprived of primary

education facilities, to reduce the number of students who quit before the completion of studies and failures in the class.

8. For children of secondary age, secondary education and vocational secondary education opportunities will be made available.
9. Various programmes will be launched according to the needs of children in specially different circumstances employed, blind, disabled, helpless, discarded, orphaned, beggars, as well as children affected by drug abuse, in order to make them able citizens of the country. The child welfare home, orphanage, S.O.S. village etc. and orphan child homes will be developed and expanded. the acts and rules for the labourers will be reformed and arrangements will be made to provide general and vocational education and primary health service facilities in the concerned factories. For the development of children affected by special circumstances, the government will give encouragement and provide facilities to involve national and international non-governmental organisations and institutions.
10. In order to protect the legal rights and benefits of children, the Children Act 1991 has already been published. As the role of non-governmental agencies is important in the effective implementation of laws regarding children, these organisations will be encouraged to disseminate information on laws relating to children and will be motivated to assist., the government in punishing those found violating such laws.
11. Various measures will be adopted to encourage and help the local agencies to fix targets relating to children and development while formulating local level plans, and programmes.
12. A high level National Child Development Council will be established to coordinate and monitor the process of implementing the plans. The government and nongovernment units involved in the children and development sector will be represented in the council. The National Planning commission will serve as the secretariat of the council.

Non- Governmental Organization

Introduction

Private and non-governmental organizations play a vital role in national development. Public welfare activities based on the tradition of gaining religious merit and fame, promoting the welfare of others, and assisting the needy are being carried out privately and institutionally in the private sector'. As a result, donations from the private sector have contributed considerably to the formation of religious and social trusts. The nongovernmental organization formally began 66 years ago with the establishment of 'Shree Chandra Kamdhenu Charkha Pracharak Mahaguthi'. The objectives were to participate in the country's development in order to supplement to government efforts, to arouse general awareness and to empower common people. Subsequently, Paropakar Organisation was established. After Nepal opened its doors to the outside world following the revolution of 1950, the Red cross, Family Planning Association, Lions and Rotary Clubs were established and run by national social worker's and volunteers with the assistance - of international organizations. A wide range of non-governmental organizations concerned with child education, and services relating to fatal diseases like leprosy, tuberculosis and cancer were established through the efforts of social workers, With the increase in the number of such organizations, the insufficiency of government acts, rules, policies and plans to integrate and promote such organisations was felt. The non- governmental organizations also felt the need for a central organisation. At the government level also an organization was felt necessary to promote social welfare and to involve non-governmental organisations in government efforts. As a result the Social Services National Coordination Council came into being as the nongovernmental organisation's central agency in 1977. The Ministry of Labour and Social Welfare was formed in 1981 with the aim of promoting nongovernmental organisations and social welfare activities through government efforts. At present, nongovernmental institutions have been classified on the basis of their functional nature as follows:

	Sector	Number
a)	Child Welfare	14
b)	Women Development ³⁴	
c)	Youth Activities	203
d)	Health Service	46
e)	Education	2
l)	Services to the blind and handicapped	12
9)	Community and Rural Development	179
h)	Environmental Conservation	16
i)	AIDS and drugs control	6
j)	Moral Development	64
	Total:	576

These institutions are categorized into national, regional and local levels. Viewed on the regional basis, about 75 percent of these institutions are in the central region. Most of these institutions are required to register simultaneously with the district administration office in accordance with the Organisation Registration Act and Social Services National Coordination Council. Considering the organisations that have only registered with the District Administration Office and are yet to register with the Social Services National Coordination Council, the above mentioned number is very likely to increase. Currently there are 53 international non-governmental organisations working directly or indirectly in Nepal by signing agreements with the Social Services National Coordination Council. of these 36 are working in the central region.

Although non-governmental organisations have developed and expanded to such an extent and government and non-governmental organizations have been formed at the central level, these nongovernmental organizations have not been able to become self reliant and to burgeon as expected, neither could the resources of the private

sector be diverted to the development process as desired. Some problems have been noticed in this area, they are mainly as follows:

1. There remained a dearth of policies, acts and rules to protect, promote and encourage non-governmental organisations.
2. The Central organisation of the non-governmental organizations and the government mainly exerted greater control and interfered instead of allowing the non-governmental organisation to run independently.
3. The investment of the private sector could not be attracted towards social and economic development.
4. The administrative procedures were not clear, simple and decentralized. The organizations lacked coordination.
5. Non-governmental organisations were concentrated in Kathmandu and were not extended throughout the Kingdom as desired.

A non-governmental organisation is naturally conceived voluntary by nature; not committed to profit making for distributing dividends among its own members; politically neutral; liberal in conducting programmes; oriented towards the upliftment of the poor, needy and helpless; and active in arousing social awareness. Non-governmental organisations should carry out works, of public importance, involve maximum people's participation and follow democratic practice in selecting the board of directors from among the volunteers. Although they are essentially social organisations, they may conduct other economic programmes that meet public requirements. Their policies, programmes and budget must be open and transparent.

In view of the limitations of available means and resources, the concrete development of the country is only possible if the vast resources of the private sector are mobilised with effective skills, energy and service, and brought to the mainstream of development to the greatest possible extent through spontaneous mutual organisation of the people. Considering this reality, the Eighth Plan has laid down policies that underline the role and responsibilities of the private and non-governmental organisations.

Policies

1. The participation of private and non-government organisations will be expanded in the field of social and economic development as these organisations are more effective from the points of view cost, flexibility, motivation and dynamism in the implementation of development programmes. Policies will be adopted to activate the people through the medium of cooperatives, consumer committees, community development and social organisations and institutions.
2. Administrative processes will be simplified in order to prevent the stagnation of the efforts of the community and non-governmental organizations in social and economic development. Thus, an atmosphere congenial to their self-promotion will be created. For this, provisions will be made for liberal acts and rules, decentralization of authority, simplification of registration procedures of organisations, and their greater autonomy. They will also be made more accountable.
3. In keeping with the liberal policy, non-governmental organisations will be given full autonomy to work in the priority sector as specified by the national plan,. An environment will be created to make the role of non governmental organisations supplementary and complementary in the development efforts of the government and local agencies. They will be encouraged to perform creative and innovative works of public importance. The non-governmental organisations will be extended to remote and rural areas from privileged areas.
4. In order to increase the efficiency of national and international non-governmental organisations, they will be encouraged by the government to work in certain specific sectors where they can work more effectively, based on their experience, comparative advantages and efficiency. International non-, governmental organisations will be encouraged to work through Nepalese non-governmental organisations instead of implementing programmes by themselves.
5. As the responsibility of launching most of the social and economic programmes at the local level now fall within the purview of local agencies (district development committees, municipalities and village development committees), the practice of efficiently involving the non-governmental sector will be made to participate actively in social and economic activities with the assistance of, in coordination with and under the guidance of those agencies. It will be guaranteed that the government will not regain control of or interfere in the programmes conducted by the non governmental organisation.
6. A central unit will operate at the central level to assist non- governmental organisations and to act as a contact point between HMG and international agencies. International volunteer organisations will be

made to register with this central unit while working in Nepal. A one window system will be adopted and this unit will function as a medium for making available necessary assistance, data and information from the government to the non-governmental organisations.

7. Apart from other development works, social organisations and institutions will be encouraged to focus their activities on empowering the weak and helpless people, classes and communities of the society to lead a life of befitting human standards; on increasing the participation of women in development; on developing the appropriate technology, its transfer and use; and on conserving the environment.
8. In areas where the management capacities of nongovernmental organisations located in rural and remote areas are weak, efforts will be made to strengthen the management capacity of such organisations through partnership with international organisations also, along with effective implementation of other social welfare activities.
9. A new system will be set up for effective monitoring and evaluation of the works of the non-governmental organisations.

Food and Nutrition

The nutritional status of the majority of Nepalese people is low. The main reasons for malnutrition and low nutrition are the scarcity of foodgrains, imbalance in distribution, poverty, illiteracy and the lack of health services. Various nutrition related surveys indicate that the majority of Nepalese children are afflicted with protein-energy malnutrition (P.E.M.). The national nutrition survey of 1975 A.D. estimates that 50 percent of Nepalese children are living under various conditions of malnutrition. Together with this, micro-nutritive problems like Vitamin-A and iodine deficiencies and the condition of anaemia have also assumed serious dimensions. As a result, the poor people, females and children are specially suffering from problems like low height and weight, anaemia, blindness, goitre and dumbness.

In accordance with Nepal's commitment to the World Summit for children 1990, a target has been fixed for improving nutritional conditions with regard to children and development by 2000 A.D. The government is equally determined to bring about improvements in the condition of malnutrition among women and the rural population. In this context, the following policies concerned with nutrition have been adopted in the Eighth Plan:

1. As P.E.M. related low nutrition is the major problem in the country, emphasis will be given on food production in the agricultural sector. Concomitantly, the production of nutritive foods such as fish, meat, milk and vegetables will be increased.
2. A supplementary food supply programme will be launched in order to arrange an effective food supply system in the geographically constrained areas and communities badly affected by the scarcity of food and distressing nutritional status. Opportunities to enhance the household food supply will be created by generating means for employment and income in order to improve the malnutrition condition among the poor families, women and children.
3. Entrepreneurs will be encouraged to disseminate information about the appropriate baby food prepared at the community and village levels, and also to develop baby food locally.
4. Nutrition education will be included from the primary level education onwards with a view to increase general public awareness with regard to nutritive food, the type of food, the manner in which it is cooked, food storage and changes to be brought about in eating habits. Nutrition education programmes will be integrated with adult literacy, agriculture, and health target projects and conducted accordingly.
5. A programme will be conducted through the sub-health post in which, the measurement of arm, height and weight of children under three years will be checked. The nutrition level of children will be improved by encouraging breast-feeding and introducing supplementary food programmes. A regular weight measurement programme for women, especially pregnant and breast-feeding mothers, will be conducted in order to improve their nutrition level. On the basis of the weight measurement, programmes related to medication, information about nutritious food and the development of kitchen garden will be conducted for women at low nutrition level.
6. Areas with a high prevalence of micro-nutrient deficiencies such as Vitamin-A, iron and iodine will be identified and a programme will be launched to supply such micro-nutrients.
7. The nutrition level of the general public will be taken as an indicator for the evaluation of the effects of development plan on the lives of the people as this has a direct bearing on the socio-economic development of the country. Collection of statistics on nutrition will be institutionalized for the purpose.
8. The National Nutrition coordination Committee will be strengthened and a food and nutrition surveillance unit will be set up to maintain inter-regional coordination for the effective implementation of programmes. Further, the nutrition programmes under the agriculture, health, education and local development sector will be made effective.

Monitoring and Evaluation

Though a lot of investment had been made in the development projects in the past, an examination of development activities reveals that if, on the one hand, plans were not implemented according to the fixed schedule, on the other, satisfactory results were not obtained from the projects whose implementation was completed. In this context, it is essential to give attention to the economized use of means and resources to increase the preparedness and efficiency in implementing the plan and programme. For this, a mechanism to select the suitable projects, remove obstacles in implementation and complete projects within the stipulated time, is of great importance. This kind of mechanisms can be developed by strengthening the system of regular monitoring and evaluation of various activities of the projects.

An analysis of the problems of on-going development projects indicates that most of the projects and programmes are unable to attain their targets because the selection process is not fixed and practical; projects are not completed in time; expenses exceed the allotted amount; loans and assistance funds are underutilized; completed projects are in need of proper repair maintenance and are unable to attain permanence. The success indicators of the projects are not clearly fixed when projects are formulated; the base line survey data are not available for evaluation; the base line survey data are not available for evaluation; and a regular system evaluating the outputs of the project is lacking.

The institutional arrangement for monitoring and evaluation is very weak. Monitoring and evaluation sections/divisions have not been set up in the majority of ministries and departments concerned with development. Under the National Planning commission's monitoring procedure, a progress report of the implementation of development projects is submitted every four months and on the basis of this review, implementation is carried out. The problems and obstacles faced during implementation are mentioned in the four monthly progress report but due to the lack of a system of regular monitoring and follow-up the problems are not solved in time. At the same time, the system of top-down and bottom-up exchange of information has not been efficient and effective to take corrective actions.

Keeping in mind the above problems, and to realize the targeted benefits from the projects it is necessary to greatly strengthen the current monitoring and evaluation system and make it effective. At the same time, it is equally important to develop definite procedural basis for selection of suitable projects during the selection phase. The information acquired from monitoring and evaluation plays an important role in selection process. These aspects have been kept in view for deciding the objectives, policies and programme of monitoring and evaluation in the Eighth Plan.

Objectives

The objectives of monitoring and evaluation in the Eighth Plan are as follows:

1. To identify and solve problems faced by the projects and complete them within the stipulated time.
2. To complete the projects according to the predetermined programme and cost.
3. To achieve the targeted economic and social benefits from the projects.
4. To update information on the project investments and achievements, and to make such information reliable and easily accessible.

Policies

The monitoring and evaluation policies are as follows:

1. The monitoring and evaluation system will be provided with political commitment from the highest government executive body and it will be considered as the main strategy in effecting reforms in the development administrative machinery. Regular guidance and association of the highest government level will be available to this system.
2. Institutional reform will be made to strengthen the monitoring and evaluation system at the central level.
3. To develop effective monitoring and evaluation network, separate monitoring and evaluation units will be set up in ministries and departments, and these will be strongly linked with the central unit of monitoring and evaluation system.
4. An appropriate work procedure will be formulated to solve the problems faced in the implementation of the projects.

5. Monitoring and evaluation will be used to assess the work-efficiency and career development of the government employees.
6. Separate service cadre will be created for the personnel working in planning, monitoring and evaluation as knowledge of planning, management, implementation, and data collection and analysis is essential for monitoring and evaluation works.
7. In order to make the project implementation more people-oriented and objective-oriented, political institutions and consumer groups will be made to participate in the monitoring and evaluation of projects at various levels.
8. Universities and other academic institutions will also be involved as required in carrying out on-going, midterm and final evaluations of projects and programmes to expedite implementation of the projects, to carry out impartial evaluation of programmes already implemented, to develop the concept for new projects and to draw lessons from the projects under implementation.

Programmes

1. The National Development Action Committee will be formed under the Chairmanship of the Prime Minister to coordinate inter-ministerial activities and to solve problems that require high level action. The concerned minister, the finance minister, general administration minister, the Vice-Chairman of the National Planning Commission, the concerned members and the member concerning the monitoring and evaluation in the National Planning Commission and the chief secretary will be the members of this committee. The committee will meet regularly once in every four months.
2. The central monitoring and evaluation division of the National Planning Commission will be the central unit for the institutional development and operation of the monitoring and evaluation system. Appropriate skilled manpower and computer and other facilities will be made available at this division.
3. on the basis of work load and number of types of projects, separate monitoring and evaluation division or separate monitoring and evaluation section in the Planning Divisions of the ministry will be formed as required in every ministry.
4. A separate service cadre related to economic planning, monitoring and evaluation will be formed to develop skilled manpower for monitoring and evaluation system. Under this cadre national and sectoral planning service sub-groups will be created and statistical service sub-group will also be merged with this cadre. Arrangements for professional development (promotion etc.) will be made under this cadre.
5. Suitable training institutions, among those functioning in the country will be strengthened for the provision of efficient training.
6. To provide continuity to the process of monitoring and evaluation and to solve the problems that arise in the process of operation and implementation of the projects, following steps will be taken:
 - (a) Apart from the previously mentioned National Development Action Committee, a Ministerial Level Development Action Committee will be constituted under the chairmanship of the concerned minister. In this committee, the concerned secretary, the representatives of the finance ministry, general administration ministry, National Planning Commission, the concerned departmental chief and chiefs of the planning and the monitoring divisions of the ministry will be the members.
 - (b) Reporting will be regularised by developing monitoring and evaluation reporting formats and appropriate indicators according to the nature of the projects.
 - (c) Impartial on-going, mid-term and impact evaluations of the projects will be done according to the needs. universities and academic institutions will also be involved in this task.
 - (d) The monitoring and evaluation data will gradually be computerized and standardised after carrying out appropriate analysis. Audiovisual equipment will be utilised to make this system effective and efficient.
 - (e) Appropriate rules and regulations will be formulated to make provision for necessary administrative authority to enable the central monitoring and evaluation system to play effective and authoritative role.
 - (f) The concepts of management by result and norms based on performance will be developed and utilized in every department in order to encourage the use of monitoring and evaluation process in career development, and reward and punishment of employees so as to increase their work efficiency.