NEPAL
REGIONAL STRATEGY FOR DEVELOPMENT

Harka Gurung

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PREFACE

This report is the outcome of the study on regional development undertaken as part of the sectoral/thematic assessments Asian Development Bank's Nepal Resident Mission (NRM) conducted to prepare a country strategy and program (CSP) for Nepal. ADB prepares the CSP every 5 years to guide its operations in each of its developing member countries. ADB's NRM prepared a CSP for Nepal covering 2005–2009, which was approved by ADB's Board of Directors in October 2004.

The study was undertaken to examine the major issues of and constraints to balanced regional development, prepare a strategy for achieving balanced regional development, and make necessary policy recommendations for effective implementation of regional development. The paper has reviewed past experiences of regional approach in Nepal's planning, examined the magnitude of regional disparity, focused on decentralization, examined the asymmetric economic relation of Nepal with its immediate neighboring countries and recommended ways for effective operationalization of a regional strategy.

The study on Nepal Regional Strategy for Development was undertaken by Dr. Harka Gurung, a highly reputed development expert in Nepal. I thank Sungsup Ra, Senior Country Programs Specialist and Head, Macroeconomics, Finance, Governance, Regional and External Relations, NRM for steering this exercise. I appreciate Arun S. Rana, Consultant for editing the report and Kavita Sherchan, External Relations and Civil Society Liaison Officer, NRM for finalizing the report.

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ABBREVIATIONS

ADB	Asian Development Bank
CBS	Central Bureau of Statistics
CSP	Country Strategy and Program
DDC	District Development Committee
FY	fiscal year
GDP	gross domestic product
HDI	human development index
IRDP	Integrated Rural Development Project
LRMP	Land Resources Mapping Project
NPC	National Planning Commission
NRM	Nepal Resident Mission
PPI	population pressure index
PPP	purchasing power parity
SADP	Small Area Development Programme
TAR	Tibet Autonomous Region of China
VDC	Village Development Committee

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EXECUTIVE SUMMARY

The first attempt to incorporate spatial dimension in Nepal's planning envisaged a series of north-south growth axes (development corridors) linking diverse natural regions. Four growth axes were outlined that offered the greatest prospect for integration and coordination of development as they represented both the east-west and north-south territorial dimensions of the country. The main reasoning behind the development of growth axes was to tie-in the economy of the tarai with those of the hill. The best way to integrate the national economy is to establish the nature and scope of complimentarity of northern and southern parts of the growth axis in terms of circulation in trade, labor and capital.

The above regional strategy was partly adopted in the Fourth Plan, covering fiscal year (FY)1970–FY75 and much discussed as a new dimension in Nepal's development. Such a regional approach was formalized with the creation of four development regions in 1972. Three elements contributed to the distortion of this regional strategy. First, the practice of giving sanctity to the formal development regions for programming led to emphasis on balance among four regions rather than reducing imbalance among their elevation zones (mountain, hill, and tarai). Regional strategy was interpreted as a wholesale dispersal instead of judicious aggregation of projects. The second element that contributed to the derailment of regional strategy was the overemphasis given to the Small Area Development Programme; initially proposed as a rural development adjunct to the overall design of growth axes, it was elevated to the main component of regional approach. The third element that led to the distortion in regional strategy was the expansion of various integrated rural development projects whose basic rural conceptualization, diversity in approach, and lack of transport component made them less effective in total impact. Thereafter, regional strategy was superseded by succession of new concerns such as basic needs approach, environment protection, and poverty reduction.

There is increasing disparity among development regions and their sub regional components. This is due both to the region's intrinsic locational factor and a development approach that favors accessible ones. Of the country's total road length of 13,223 kilometers, the Central Development Region leads with a share of 39.1%. Mountain sub regions of the Mid Western and the Western Development Region, covering 27,170 km^2, do not have any roads. The Central Region leads with more than half of the total hydropower generation. There is no such infrastructure in the tarai sub regions of the Far Western and the Mid Western Regions.

Nepal's adult literacy rate for 2001 was 53.7%. Among the five development regions, the Western (56.6%) and the Eastern (53.9%) exceed the national average. The mid western mountain, with a literacy rate of 31.8%, is ranked at the bottom. The national average ratio between health institution and population is 1:5,588. This varies from 1:5,332 for the Far Western Region to 1:6,294 for the Central Region. The number of households with access to piped water supply is reported as 57.5% at the national level. The Western Region leads with 71.7% of households with such facility, while that of the Far Western Region is only 49.1%. Total operating land holding reported comes to 43.7% of the registered land, indicating a large extent of such land being left fallow. The Far Western Region has only 8.5%, compared to the Eastern Region with 30%. Disparity is most pronounced in the regional pattern of industrial investment. Thus, the Central Region claims 74.8% of the total industrial asset, of which Kathmandu Valley alone accounts for 61.2%. The far western hill, mid western mountain, and western mountain sub regions have no such industrial assets.

The per capita income for the country in terms of purchasing power parity (PPP) is estimated at $1,310. It is only the Central Region with $1,597 that exceeds the national average. The Mid Western Region has the lowest per capita income, $988. In 1977, those with high levels of development included three tarai and two hill sub regions. By 2001, three hill and two tarai sub regions had such levels of development. There were no tarai sub regions in the low value category in 1977. In 2001, two tarai sub regions fell in such a category. That the central hill replaced the eastern tarai in the top rank, and the western hill the central tarai in the second rank indicates a spatial shift in development level by elevation zone. There was no change in the ranking of central mountain (10th), mid western mountain (14th), and far western mountain (15th). According to the development regions, the Central Development Region led both in 1977 and 2001, the Western Region replaced the Eastern Region in the second place, and the Mid Western Region replaced the Far Western Region in the fourth place.

Development planning has to encompass the totality of national space. Since regions differ both in natural and human resources, the approach should address their inter relationship into a coherent spatial framework for growth and equity. Economic activity is determined by the type of land resources available, but Nepalese plans have entirely overlooked the aspect of land use. Therefore, land use planning should constitute an essential part of national planning to optimize exploitation of regional resources. Another important aspect of spatial framework that determines the future pattern of development relates to road infrastructure. In spatial planning terms, the East-West Highway should be developed as the spine of national development with the connecting north-south roads as a series of ribs for lateral diffusion. Some of these should be extended further north giving priority to those that can provide access to future sites of hydropower generation. It is necessary to provide road access from the Tibet Autonomous Region of China (TAR) to some remote areas to exploit recent developments across the border.

The reality of the East-West Highway as the pivotal axis will also entail reconsideration on other policy areas such as industrialization and urbanization. Selected locations at the junction of the East-West Highway and north-south roads would be the most appropriate sites for major industrial clustering. Also, industrial estates should be established in some backward areas to process local products for export to the south or north according to the transport connection. Such industrial estates have to be promoted with a higher level of incentives due to their disadvantageous location. Urbanization characterizes a dynamic location which means more than mere population size—first, the definition must be rationalized to encompass other significant criteria, such as non-primary occupation, density of population, and contiguity of built-up area; second, there should be a design of rank order for urban areas to articulate functional linkages in terms of their population size and range of activities; the third is to integrate economic functions to the administrative centers.

Decentralization has been an incessant theme in Nepal over the last five decades, although past initiatives have all foundered on the bedrock of the highly centralized governance system. One of the constraints to effective decentralization has been the obduracy of sectoral approach. Thus, decentralization remains ineffective as local administrations have no control over line agencies, which have access to resources and technical expertise. Such a vertical command system is mainly responsible for the problem of lack of integration among sectoral agencies at the operational level. The decentralization effort in Nepal has also failed due to the economic fragility of the districts. District autonomy is feasible only through consolidation of their economic base with a wider tax authority, and revenue sharing of income from local resource exploitation. The present

administrative districts have no capacity for being agents of decentralization due to their poor economic base, as only 11 out of 75 districts have surplus revenue. Reduction in number of districts seems a logical option to economize administrative cost since there is a limit to the increase of local revenue. The proposal of district consolidation is to reduce the number of administrative districts to 25, one third of the number that currently exists. Such a rationalization of sub national political units should also be extended to the lower hierarchy—that is, drastic reduction in number of village development committees and municipalities. Consolidation of districts will considerably enlarge their area of coverage and reduce administrative costs by two thirds. Consolidated districts with enhanced resources could be entrusted with some local functions presently administered by the central government. This would also imply curtailing the present highly centralized budgetary allocation system and instead empower districts with more taxation authority. Another mechanism to enhance district income would be allocation of certain percent of revenue generated from the extraction of the district's natural resources. Accordingly, mountain/hill districts with hydroelectric projects, and tarai districts with timber exports would have additional revenue.

In Nepal, where different regions are inhabited by distinct sociocultural groups, it is necessary to reconcile economic and social aims within the framework of national development. The state ideology of Nepal, based on the caste system, has remained highly exclusionary. The agenda of social inclusion has political, sociocultural, and economic ramifications. The political aspect needs to consider a secular constitution, proportional representation, and devolution to local governments. The sociocultural aspect should encompass religious and linguistic equality, and a reservation system. In the economic sphere, the need is for affirmative action in education and employment for disadvantaged groups.

Regional strategy needs to consider not only the economic articulation among regions within the country, but also the relative development level immediately across the border. The Nepalese economy is too integrated with that of India, which is the source of labor and raw materials. The strategy for the development of Nepal vis-à-vis India cannot be competitive as Nepal has too many disadvantages. Rather, it should be complementary, providing scope for product specialization between the highlands (Nepal) and lowlands (India). If Nepalese development could concentrate on the specialized processing of subtropical and temperate products, these would find a ready market in India. Similar to the asymmetric economic relation between India and Nepal, trade between Nepal and TAR used to be dominated by Nepal. However, TAR is no longer an economic backwater but a vibrant region, and is presently undergoing much economic transformation. Nepal's regional strategy has to consider this new reality, which provides scope for its northern border areas. It would take decades for many mountain districts to be linked by roads with the south; these should instead be connected by road with the Tibetan prefectures of Ngari in the west, and Xigaze in the east.

The main purpose of incorporating the regional approach in national planning is to reduce spatial disparity in development. There is much scope for mobilizing external resources as well as exploiting the opportunity of regional cooperation. With careful manipulation of total resources, domestic and foreign, it is possible to mitigate the glaring spatial disparity and also promote economic growth. The 20-point recommendations of this study covers the following aspects: (i) spatial orientation, (ii) land use planning, (iii) transport access, (iv) industrial location, (v) urban system, (vi) decentralization, (vii) social inclusion, and (viii) organizational change.

I. INTRODUCTION

A. Terms of Reference

Balanced regional development has been one of the agendas of the government since the Fourth Plan, covering fiscal year (FY)1970–FY1975. However, progress has been limited—regional disparity is much more prevalent, intense, and severe in rural areas and the mountain zone. Government efforts for regional development have not been effective mainly due to an inadequate policy framework to implement the concept. There is no integrated and coherent policy framework for regional development based on a thorough assessment of regional conditions and policies and programs are still fragmental and unfocused. A lack of clear demarcation of functional responsibilities of local bodies and the central government for regional development has added more confusion since the Government initiated the decentralization program. There has been no attempt to examine the potential of enhancing spatial development through the promotion of regional cooperation with neighboring countries.

The Asian Development Bank's (ADB) Country Strategy and Program 2005–2009 (CSP) for Nepal lays emphasis on greater balance in the development of different regions of the country so as to promote a more inclusive development process. The CSP states that in order to promote broad-based economic growth, the key focus will be on bringing excluded regions and social groups into the economic mainstream by fostering connectivity between all part of the country and facilitating trade between Nepal and its neighbors.[1] The present study was done as a background exercise for such a development strategy. The objectives of the study were to: (i) examine the major issues and constraints to balanced regional development, (ii) prepare a strategy for achieving balanced regional development, and (iii) make necessary policy recommendations for effective implementation of regional development. Specific scopes to be covered were defined as: (a) extent of socioeconomic disparities across the development regions; (b) preparation of broad regional strategy through enhancing growth, improving service delivery and social inclusion; and (c) assessment of regional cooperation for such strategy.

The study has attempted to address the above task in the following arrangement. The introductory chapter deals with the study approach, clarification on regional concept, as well as the hierarchy of regions in Nepal. Chapter II provides a review of past experiences of regional approach in Nepalese planning. Chapter III and IV attempt to portray the magnitude of disparity, both at the levels of the five development regions, and their 15 sub regional components. Chapter V is devoted to some important aspects that determine spatial development. Chapter VI is focused on decentralization with some suggestions on administrative consolidation and resource sharing. Chapter VII examines the asymmetric economic relation of Nepal with its immediate neighboring countries and the concluding chapter enumerates 20-point recommendations for effective operationalization of regional strategy.

B. Study Approach

It seems necessary to clarify some notions and terms regarding regional concept in

[1] ADB. 2004a. *Nepal: Country Strategy and Program (2005–2009)*. Manila.

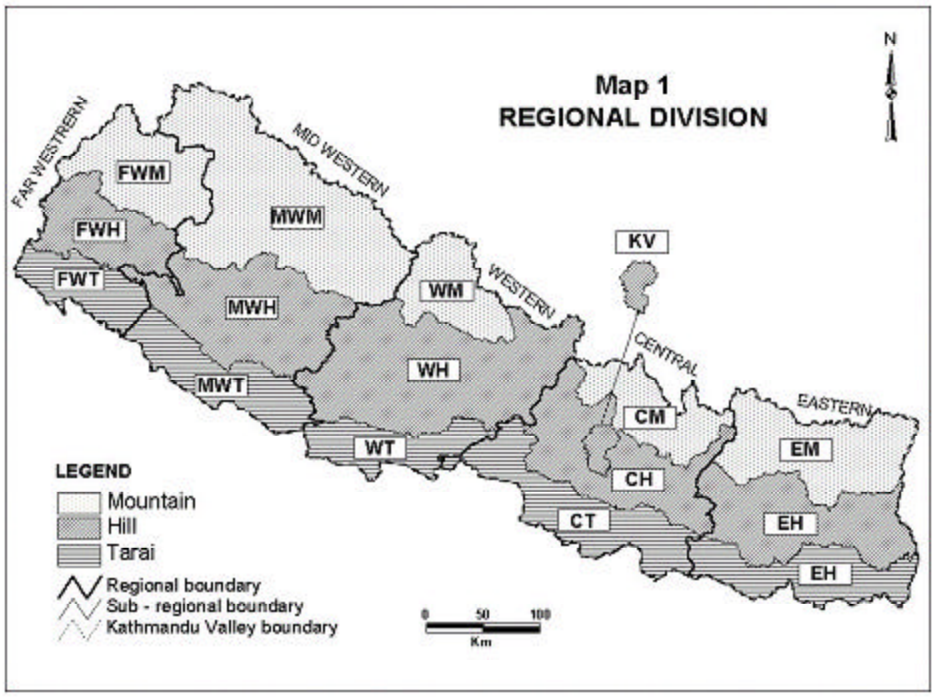
development planning. The first notion is that regional planning is sometimes equated with urban planning of a metropolitan area. However, regional approach can be applicable not only for a defined sub-national area but also to the national space, and therefore, relevant in macro planning. The second notion tends to consider regional planning as being distinct from economic planning owing to their difference in emphasis—equity of the former and efficiency of the latter. In fact, regional strategy is basically spatial planning for resource allocation based on comparative advantage. Thus, the appropriate concept would be one of regional strategy for development planning. The third notion relates to overt emphasis on balanced development under the rubric of regional planning. Heterogeneity in physical attribute, natural resource, and culture complex are characteristic features of most regions, be they large or small. It is difficult to seek balance among such diverse regions from economic consideration. What development intervention should do is to reduce the existing disparity. Therefore, the main rationale of a regional approach is to promote economic exchange among the diverse regions and culture areas. Thus, regional strategy should be considered more as the pursuit for national integration.

The next task is to elucidate some terms used in the regional context. Those prevalent in Nepal are 'census regions', 'development regions', and 'eco-development regions'. Early population censuses of Nepal recognized three elevation zones (hill, inner tarai, tarai) and two lateral divisions (west, east). Since 1971, the census regions recognize three elevation zones (mountain, hill, tarai), and east-west division based on the number of development regions. In 1972, the country was divided into four development regions along the east-west axis (Eastern, Central, Western, and Far Western). In the late 1970s, the Far Western Development Region was split into two, namely the Mid Western and the Far Western Development Regions. Agricultural specialization policy since 1972 distinguished three ecological regions, namely the mountain for livestock, hill for horticulture, and tarai for food grain. This writer has devised and subscribes to 13 geographical regions for spatial analysis of Nepal. Such a division recognizes: (i) three major drainage basins (Karnali as western, Gandaki as central, and Kosi as eastern), (ii) the inner tarai as a distinct interstice between the hill and plain zone, and (iii) separate identity of Kathmandu Valley (Tables 13 and 17). However, as prescribed by the terms of reference, all data and discussion in this study are presented on the basis of development regions and their component elevation zones or sub regions.

The combination of five 'development regions' and three 'ecological regions' yields 15 areal units that are used now as census regions and also designated as 'eco-development regions' (Map 1). However, the so called eco-development regions present a conceptual problem. By geographic definition, the development regions can be considered as functional or organic regions, while the elevation zones constitute formal or natural regions. These two categories of regions are not methodologically compatible. The resolution of the problem lies in adopting the principle of regional hierarchy. Thus, development regions that encompass all three elevation zones can be assigned as regions of the first order, and their three elevation zone components as sub regions of the second order. All indicator data used in this study are presented on the basis of development regions (in upper case) and 15 sub regions (in lower case). According to the official 15 units or sub regions, Kathmandu Valley is included within the central hill. This tends to mask the metropolitan importance of its three districts as evident from some sample indicators given in the table below. In this study, the data for Kathmandu Valley are given separately where available so as to highlight its pre-eminence in development.

Indicator	Central Hill Including Kathmandu Valley	Central Hill Excluding Kathmandu Valley	Kathmandu Valley Only
1. Human development index	0.537	0.452	0.610
2. Per capita income	$2,083	$1,115	$2,458
3. Net migration	185,654	- 60,108	245,762

Sources: Table 6, 7 and 8.



Notes: FWM = far western mountain; FWM = far western hill; FWT = far western tarai; MWM = mid western mountain; MWH = mid western hill; MWT = mid western tarai; WM = western mountain; WH = western hill; WT = western tarai; KV = Kathmandu Valley; CM = central mountain; CH = central hill; CT = central tarai; EM = eastern mountain; EH = eastern hill; and EH = eastern tarai.

II. STATUS REVIEW

A. Strategy Initiation

The first attempt to incorporate spatial dimension in national development envisaged a series of north-south growth axes or development corridors linking diverse natural regions.[2] Such juxtaposition of elevation zones within a development corridor was to generate interregional circulation (Map 2). Four growth axes, which offered the greatest prospect for integration and

[2] Gurung, H. 1969. *Regional Development Planning for Nepal*. Kathmandu: National Planning Commission.

coordination of development programs in that they present both the east-west and north-south territorial dimensions of the country, were outlined (Table 1). Each of the growth axes either had a road, or a road was being constructed or planned. These roads would link a series of growth centers where development efforts could be concentrated in order to achieve full economy of scale and encourage agglomeration. Since the development corridors traverse through the whole gamut of regional types, the growth centers at specific locations would act as service centers for the regional population. The set of growth centers along the arterial link would further induce growth in terms of agricultural transformation, industrial location, and trade activities as well as social services.

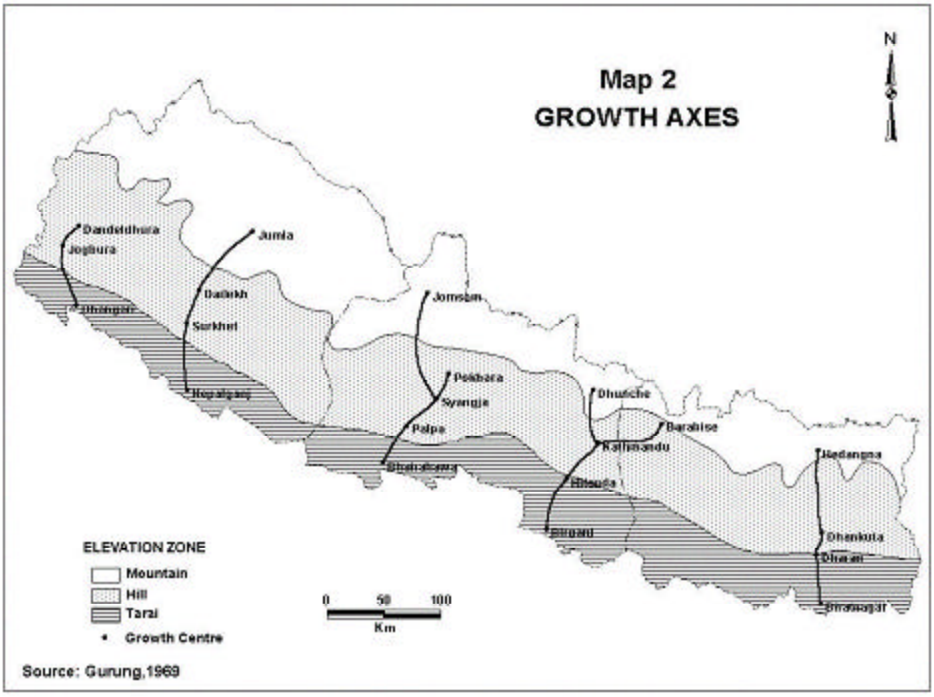
Table 1: Regional Development Areas

Macro Region	Growth Axis	Growth Centers (Geographic location)
Kosi (eastern) Section	Biratnagar-Hedangna	1. Hedangna (mountain); 2. Dhankuta (hill); 3. Dharan (tarai); 4. Biratnagar (tarai)
Gandaki (central) Section	Bhairawa-Jomsom	1. Jomsom (mountain); 2. Pokhara (hill); 3. Syangja (hill); 4. Palpa (hill); 5. Butwal (tarai); 6. Bhairawa (tarai)
Metropolitan (Kathmandu) Section	Birganj-Barabise/ Dhunche	1. Dhunche (mountain); 2. Barabise (hill); 3. Kathmandu (metropolitan); 4. Hetauda (inner tarai); 5. Birganj (tarai)
Karnali (western) Section	Nepalganj-Jumla	1. Jumla (mountain); 2. Dailekh (hill); 3. Surkhet (inner tarai); 3. Nepalganj (tarai)

Source: Gurung, H. 1969; p.17.

Development of selected growth centers would act as a demonstration for formulating a development approach best suited to other areas with similar conditions. Thus, Biratnagar, Birganj, Bhairawa, and Nepalganj would exemplify development patterns for tarai towns, while Dhankuta, Palpa, Syangja, and Dailekh would be models for hill areas (Table 1). For the mountain region, Hedangna, Dhunche, Jomsom, and Jumla would clarify development models for remote areas. The aim of developing growth centers was the creation of polyfunctional settlements to cater to the diverse needs of their hinterland.

The most important aspect of a growth center approach is the positive nature of polarized development as it takes place, whereby the growth spreads to the surrounding area—that is, areas in organic link with the growth center would gain from concentrated economic activities through the process of multiplier effect. As the economy integrates itself, and commodity and factor markets become more efficient, the spread effect may begin to assert itself from these nuclei of development. In identifying such growth centers, primacy was given to those areas with maximum prospects for radiation effect to the peripheral areas. The four development corridors linking the 4 sets of growth centers make a regular transect across Nepal at distances of approximately 120 to 160 km with the assumption that their lateral impact would coalesce at a certain point in time and thus cover the entire country. The process of lateral progression would be further accelerated by transverse connections such as the Kathmandu- Pokhara road which link two growth axes.



The main reasoning behind the development of growth axes was to tie-in the economy of the tarai with those of the hill. In order to maintain and develop economic viability of the hill, and transmit growth from one region to another, it is essential to determine and develop those products in the northern areas for which there is demand in the south. The best way to integrate the national economy is to establish the nature and scope of complementarity of northern and southern parts of the growth axis in terms of organic circulation in trade, labor, and capital.

Apart from the north-south (hill-tarai) diversity, there are also inter-regional differences among the eastern (Kosi), central (Gandaki), and western (Karnali) sections. The Karnali section, which accounts for nearly 42% of the total area, supports only 21% of the total population. Low rainfall and extensive highlands contribute to the Karnali section being sparsely populated. This section is also deprived of the urban advantages of the Gandaki section, and of the periodic markets present in the Kosi section. Both the tarai and the hills of the Far Western Development Region are, therefore, comparatively less developed than those of other areas. In order to develop the economy of the Karnali section, it seems necessary to devise still another growth axis for areas not amenable to the main Nepalganj–Jumla axis. This supplemental development corridor should be aligned along the Dhangarhi–Dandeldhura Road as a means of effectuating development activities in the Far Western districts. The above regional strategy was partly adopted in the Fourth Plan (FY1970–FY1975), with the original paper incorporated as Appendix III (pp. 281–291). Similarly, concentration of limited resources was included as one of the plan's five major policies.[3] The plan's transport sector envisaged the construction of four gravel roads totaling 254 kilometers along the growth

[3] National Planning Commission. 1970. *The Fourth Plan (1970–75)*. Kathmandu. The other 4 policies were: (i) mobilization of internal resources; (ii) incentive to private sector; (iii) trade; and (iv) social justice.

axes.[4] However, the implementation took place much later. The adoption of regional strategy was followed by field investigations to assess economic linkage along the designated growth axes. One initial study proposed some regional priorities by sector activities.[5] Another study examined the economic structure of Kosi section (east) based on the framework of a 40 x 41 input-output table and significantly noted that organization and management problems as the crucial bottlenecks of development rather than the lack of capital and natural resources.[6] A similar, detailed regional analysis for the Kathmandu growth axis (central) was also done to evaluate the applicability of the strategy.[7] The regional approach was much discussed as a new dimension in Nepal's development[8] and as being a strategy for integrated development.[9] Such an approach was formalized with the creation of four development regions in 1972. The formation of such first order formal regions with an east-west division was soon followed by a royal directive on specialization of agricultural production by elevation zones. The King's periodic residence in the regional development centers gave further impetus to the regional concept. Since the royal visits were an exercise in development as well as political intimacy, there was less scope for emphasizing particular areas as the growth axes for intensive development within the regions. However, these extended royal tours did help to some extent in de-emphasizing the supra role of metropolitan Kathmandu.

B. Distorted Interpretation[10]

The Fifth Plan (FY1975–FY1980) adopted a 4-point regional policy as specified in the original strategy paper.[11] These were: (i) reduction of inter-regional disparity, (ii) integration of the national economy, (iii) breaking the vicious circle, and (iv) elimination of imbalances among projects. It was the first periodic plan to estimate resource allocation by development regions. However, there was no integration of the socioeconomic projects/programs along the growth axes. Three elements contributed to the distortion of the regional strategy of national economic integration. Firstly, the practice of giving sanctity to the formal development regions for programming led to emphasis on balance among 4 regions rather than reducing imbalance between their elevation zones (mountain, hill, and tarai). The original idea of concentrating development activities along the growth axes in order to integrate the elevation zones with comparative advantage was replaced by a model of diffused activity across development regions. Regional strategy was interpreted as a wholesale dispersal instead of judicious aggregation of projects. Leading economists not only failed to distinguish between the growth center (focal point) and growth axis (area of activity) but visualized

[4] ibid. op.cit. These were Nepalganj-Surkhet (77 km), Putalikhet-Baglung (80 km), Trisuli-Dhunche (25 km) and Dharan-Dhankuta (72 km).

[5] Okada, F. E. 1970. *Preliminary Report on Regional Development Areas in Nepal*. Kathmandu: NPC.

[6] Ojha, D. et al. 1972. Regional Analysis of Kosi Zone/Eastern Nepal: Working Method for Regional Planning in Nepal. Berlin and Kathmandu: German Development Institute/ Centre for Economic Development and Administration. 2 vols. Abstract in *Socio-Econ. Plan. Sci.* 7 (1993): 213–282.

[7] Zehender, W. et al. 1975. *Evaluation of a Regional Development Strategy: A Case of Kathmandu Growth Zone*. Berlin: German Development Institute.

[8] Pradhan, P. 1973. *A New Dimension in Nepal's Development: The Regional Approach in Planning and People-oriented Development Strategy*. Kathmandu: CEDA.

[9] Sanger, C. 1973. *Three Strands of Rope*. Ottawa: IDRC.

[10] Gurung, H. 1984. *Nepal: Dimensions of Development.* Kathmandu.; and Gurung, H. 1989a. *Nepal: Dimensions of Development.* Kathmandu.

[11] National Planning Commission. 1975. *The Fifth Plan (1975–80).* Kathmandu.

regions as discrete subdivisions of the national territory and even proposed long-term investment and growth models without examining regional resources.[12]

The second element that contributed to the derailment of regional strategy was the overemphasis given to the Small Area Development Program (SADP) during the Fifth Plan. Initially proposed as a rural development adjunct to the overall design of growth axes, it was soon elevated to the main component of regional strategy. Thus, the excellent earlier studies in regional economic analysis[13] were superseded by those concentrating on SADP areas.[14] With this diversion in focus, there was not only a virtual cessation of meaningful research relating to regional development, but the emphasis itself changed to rural development. SADP was soon to become the precursor to the integrated rural development project (IRDP).

Thus, the third element that led to the distortion in the regional strategy was the emergence and expansion of various IRDPs. Since the mid-1970s, 41 districts have been covered by 16 IRDPs supported by 12 donors (Map 3 and Appendix B).[15] As of the mid-1990s, 9 donors had expended over NRs 2,776 million in 30 such districts.[16] The IRDPs with much external finance served well to fulfill what the concept of growth axis lacked in program funding. Some of the IRDPs such as those for Kosi Hill, Rasuwa-Nuwakot, and Karnali-Bheri did relate to parts of the original growth axes, but their basic rural conceptualization, diversity in approach, and lack of transport component made them less effective in total impact. It was with this realization that the Lamosangu-Jiri Road was made the centerpiece of the Integrated Hill Development Project after two decades of tinkering with the Jiri Multipurpose Development Project without a road connection.

Three academic studies on regional planning done in the late 1980s have made diverse interpretations of the concept. One of these emphasized a spatial framework with strategic activities for different planning regions.[17] Another study based on Marxist analysis diagnosed

[12] Shrestha, B.P. and S.C. Jain. 1978. *Regional Development in Nepal: An Exercise in Reality*. Delhi: Development Publishers.

[13] Ojha, D. et al. 1972. Regional Analysis of Kosi Zone/Eastern Nepal: Working Method for Regional Planning in Nepal. Berlin and Kathmandu: German Development Institute/ Centre for Economic Development and Administration. 2 vols. Abstract in *Socio-Econ. Plan. Sci.* 7 (1993): 213–282; and Zehender, W. et al. 1975. *Evaluation of a Regional Development Strategy: A Case of Kathmandu Growth Zone*. Berlin: German Development Institute.

[14] Centre for Economic Development and Administration (CEDA). 1975. *Regional Development Study (Nepal)*. Part I: General Report; Part IIa: Far Western Development Region; Part IIb: Rural Development Package Programme Dailekh; Part IIIa: Kosi Zone; Part IIIb: Rural Development Package Programme Khandbari. Kathmandu: Mimeo, 803 pages.

[15] Gurung, H. 1999. Area Planning in Nepal: Review of Experiences. Report commissioned by International Center for Integrated Mountain Development.

[16] Shrestha, S. 1997. A Study Report on Integrated Rural Development Projects in Nepal: A Review Analysis. Kathmandu: IIDS.

[17] Joshi, J. 1985. *Regional Strategy for Development: A Case Study of Nepal*. Kathmandu.

> the apparently contradictory scenario of excessive polarization around the capital city, on the one hand, and outward orientation towards India along a north-south dendrite stretching from mountain to tarai, on the other. This may be cited as an example of the typical mode of spatial integration in a semi-feudal, semi-neocolonial society.[18]

This analysis portrays the reality of Nepal's dependence as a periphery of India but the study provides no prescription to remedy such an imbalance. The third study relied heavily on the regional modeling of earlier economists[19] and favored a concentration of development activities in the most advanced development regions (Eastern and Central).[20]

The National Planning Commission (NPC) attempted an exercise in regional approach with a 10-year perspective covering the span of the Eighth and Ninth plans (1990–2000).[21] This draft document presents the development level of 15 sub regions on the basis of 25 socioeconomic indicators (Table 11). It also included a brief proposition on regional programs but these were not incorporated in the plan. Thereafter, regional strategy has been superceded by a succession of new development themes, such as basic needs approach, environmental concern, and poverty reduction. The Tenth Plan (2002–2007) makes reference to regional development and balance with policy components of people's participation, inter-regional economic linkage, and resource allocation.[22] It also refers to some program priorities by elevation zones, but there is very little on inter-sectoral integration at the regional level. For example, its transport sector includes 60 priority roads with an allocation of NRs 20,047 million; of these, 12 remote area roads have a share of 10.1% as compared to 7.6% for Kathmandu Valley roads. Thus, the backward areas still remain inaccessible as in the past.

III. EXTENT OF DISPARITY

There is much disparity among development regions and their sub regional components. This is due both to the region's intrinsic locational factor and development activities that favor accessible ones. The latter aspect becomes obvious when comparing the change over time across various sectors of development activity.

A. Temporal Change

Change over time has been examined here on the basis of three sets of data. The first is

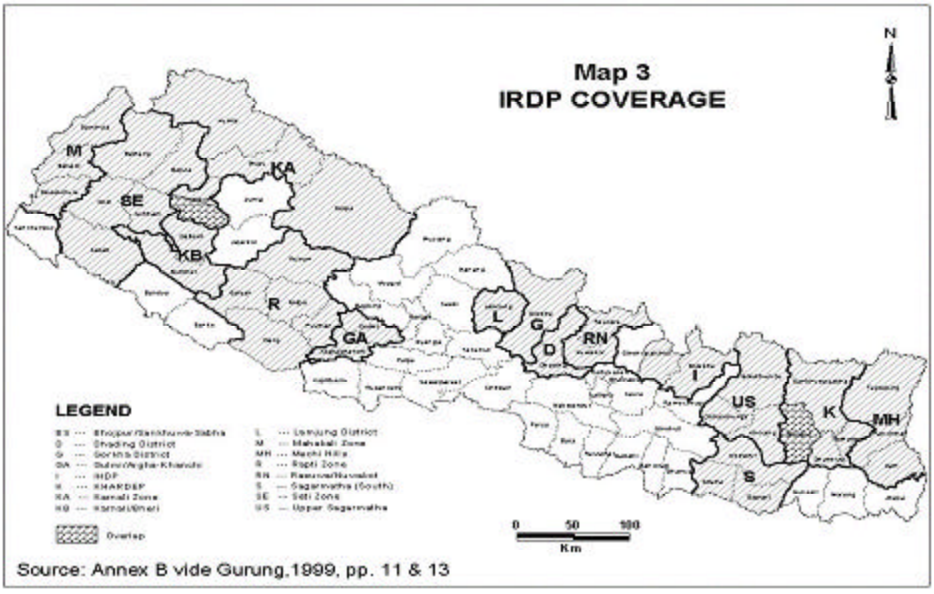
[18] Bhattarai, B. 2003. *The Nature of Underdevelopment and Regional Structure in Nepal: A Marxist Analysis*. Delhi: Adroit Publishers. This citation is based on the original dissertation completed in 1986.

[19] Shrestha, B.P. and S.C. Jain. 1978. *Regional Development in Nepal: An Exercise in Reality*. Delhi: Development Publishers.; and Pant, Y.P. and S.C. Jain. 1980. *Regional Imbalances and Process of Regional Development in Nepal*. Delhi: Development Publishers.

[20] Amatya, D.B. 1987. *Perspectives in Regional Problems and Regional Development in Nepal*. New Delhi: Sterling Publishers.

[21] National Planning Commission. 1987. Chhetriye Bikashko Sthiti (Status of Regional Development). Draft in Nepali. Kathmandu: Mimeo, 40 pages.

[22] National Planning Commission. 2003. *The Tenth Plan (2002–2007).* Kathmandu.



Source: Annex B vide Gurung,1999, pp. 11 & 13

based on the progress of select indicators in three decades with 1971 as the base year. The second is the regional pattern of development expenditure for two fiscal years two decades apart. The third is gross domestic product (GDP) by sub regions at an interval of 15 years. Table 2 presents data on nine select indicators to compare their achievement of three decades in the four development regions. Nepal had 79 more persons per square kilometer in 2001 than in 1971. The highest population density increase took place in the Central Region, and the lowest in the Far Western Region; this may be taken as indicators of their relative difference in development advantage. Nepal's food grain production doubled during the period 1971–2001. Of the total increase, the Eastern Region led with 30%, while the Western Region had the lowest increase (19.9%). The increase in irrigated area was 4.4 times, of which the Far Western Region contributed more than half and the Western Region registered the least (6.8%). Road mileage during 1971–2001 increased 7.6 times; the Central Region led with 39.4%, while the Western Region registered an increase of only 15.3%. In 2001, there were 21 more airports than in 1971, with the Far Western Region showing a twofold increase in their numbers.

The number of industrial establishments increased 4.9 times, with the continuing dominance of the Central Region: 68.7% in 1971 to 46.6% in 2001. The Far Western Region's share of such an increase was only 11.1%. Hydropower generation recorded an increase of 12 times; of this, the Western Region led with more than half and the Eastern Region contributed the least. The number of schools increased 4.8 times and this increase was comparatively even across development regions. The increase in hospital beds was 8.3 times, much of which was in the Central Region while the Eastern Region recorded the least increase. Some of the above indicators show a mismatch between investment and production. The increase in food grain was less than half that of irrigated area extension (2.1 vs. 4.4 times), and the increase in industrial establishment only about one-third of power generation (4.9 vs. 12.4 times). These data are related to the macro level development regions.

Table 2: Regional Variation, 1971–2001

Select Indicator	Unit	Far Western[a]	Western	Central	Eastern	Nepal
1. Population density	Person/km^2	+40.1	+71.6	+152.0	+89.5	+78.8
2. Food grain production	1,000 MT	+829	+771	+950	+1,160	+3,865
3. Irrigated area	ha.	+15,280	+1,841	+3,777	+6,205	+27,102
4. Road length	km.	+2,596	+1,758	+4,523	+2,616	+11,492
5. Airports	Number	+8	+4	+4	+5	+21
6. Industrial establishments	Number	+284	+538	+1,043	+689	+2,554
7. Hydropower generation	kW	+15,189	+258,605	+206,486	+4,803	+485,083
8. Schools	Number	+7,132	+7,073	+8,964	+6,105	+29,274
9. Hospital beds	Number	+1,207	+1,278	+3,570	+824	+6,879

[a] The Mid Western Region was created only in 1978.
Source: Appendix A

The next two data sets examine temporal change both at the development region and sub regional levels. The comparison of development expenditure is based on data collected at an interval of 22 years. In the FY1978/79, such expenditure totaled NRs 1,712 million. The Central Region led with a share of 54.9%, while the Eastern Region had only a 13.3% share (Table 3). Among the 15 sub regions, central hill topped with 28.1%, of which Kathmandu Valley alone claimed 19.9%. Central tarai was in the second place (23%), and eastern mountain (1.2%) the last. Such was the situation during the period when regional approach was being emphasized in Nepalese planning.

More than two decades later, in FY2000/2001, the total development expenditure increased 22.2 times in nominal terms (Table 3). Of the total NRs 38 billion, the share of the Central Region was nearly two-thirds, with that of Kathmandu Valley showing an increase from 19.9% to 53.6%—59 times that of 1978/79. As a consequence, all the other development regions had a

Table 3: Development Expenditure, 1978/79 and 2000/2001

	REGION/ Sub region	1978/79[a]		2000/2001[b]		Change	
S.N.		NRs '000	%	NRs '000	%	NRs '000	Times Increase
A.	**FAR WESTERN**	**268,364**	**15.7**	**5,563,298**	**14.6**	**5,294,934**	**19.7**
1	Mountain	59,123	3.5	1,891,924	5.0	1,832,801	32.1
2	Hill	62,545	3.7	2,079,921	5.5	2,017,376	32.3
3	Tarai	146,696	8.6	1,591,453	4.2	1,444,757	9.8
B.	**WESTERN**	**276,335**	**16.1**	**3,394,683**	**8.9**	**3,118,348**	**12.3**
4	Mountain	20,517	1.2	117,465	0.3	96,948	5.7
5	Hill	121,571	7.1	2,294,238	6.0	2,172,667	18.9
6	Tarai	134,247	7.8	982,980	2.6	848,733	7.3

(Continued on Next Page)

(Table 3 continued)

S.N.	REGION/ Sub region	1978/79[a] NRs '000	%	2000/2001[b] NRs '000	%	Change NRs '000	Times Increase
C.	**CENTRAL**	**939,375**	**54.9**	**24,856,032**	**65.3**	**23,916,657**	**25.5**
7	Mountain	65,238	3.8	434,558	1.1	369,320	5.7
8a	Hill+ KV[c]	480,363	28.1	21,904,875	57.5	21,424,512	44.6
8b	Hill – KV[c]	139,077	8.1	1,489,666	3.9	1,350,589	9.7
8c	KV[c] only	341,286	19.9	20,415,209	53.6	20,073,923	58.8
9	Tarai	393,774	23.0	2,516,600	6.6	2,122,826	5.4
D.	**EASTERN**	**227,587**	**13.3**	**4,251,889**	**11.2**	**4,024,302**	**17.7**
10	Mountain	17,063	1.0	288,416	0.8	271,353	15.9
11	Hill	62,322	3.6	1,186,741	3.1	1,124,419	18.0
12	Tarai	148,202	8.7	2,776,732	7.3	2,628,530	17.7
	NEPAL	**1,711,661**	**100.0**	**38,065,902**	**100.0**	**36,354,242**	**22.2**

Source: [a] Banskota, M. 1979; p. 52.
[b] Financial Comptroller General's Office. 2002; pp. 91–93.
[c] Kathmandu Valley.

lower share than two decades earlier. Among the sub regions, central hill led (57.5%) followed by eastern tarai (7.3%). The sub regions with the lowest share of development expenditure were eastern mountain (0.8%) and western mountain (0.3%). Development expenditure for the Central Region increased 26 times compared to 22 times for the total. Increase for the other regions was 20, 18, and 12 times in the Far Western, Eastern, and Western Regions, respectively. Among the sub regions, central hill led with a 45 times increase. The next in league were far western hill and far western mountain (32 times). Those with a very small increase were the tarai sub regions of the Far Western, Western, and Central Development Regions.

The third temporal data set relates to GDP for FY1984/85 and FY1999/2000. Of the total GDP of NRs 44,267 million estimated for 1984/85, the Central Region had a share of 41.8% (Table 4). The next was the Eastern Region, with 28.1%. The Far Western Region had the lowest share, with only 5%. Among the sub regions, central tarai and eastern tarai each claimed a fifth of the total GDP. Central hill came next with 19.4%. Those with very low GDP were mountain sub regions of the Far Western, Mid Western, and Western Development Regions.

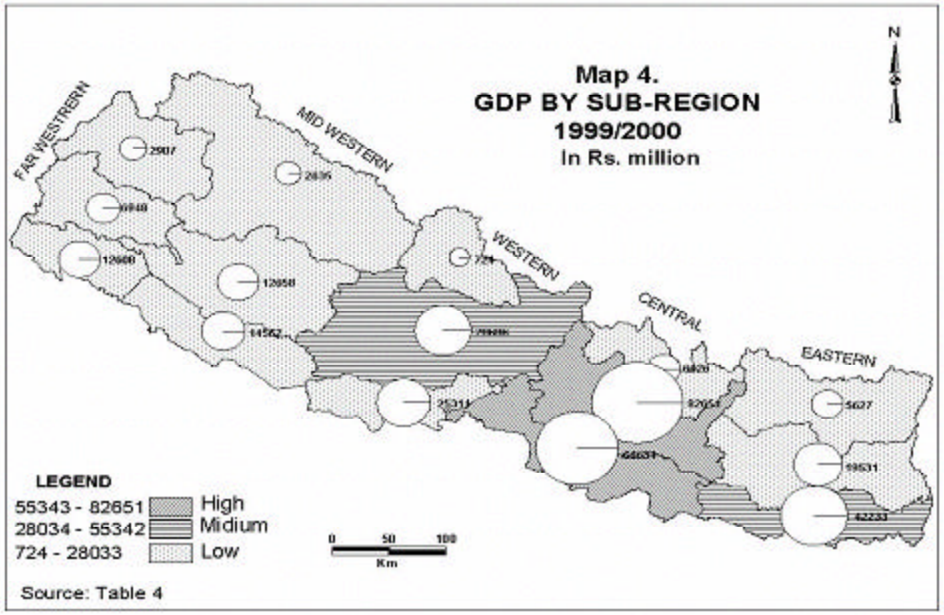
The total GDP for FY1999/2000 was estimated at NRs 330 billion, or 6.4 times that of 1984/85 in nominal terms (Table 4). In regional distribution, the Central Region had the lion's share with 47.2%. The share of other regions was 20.4% for the Eastern, 16.5% for the Western, 9% for the Mid Western, and 6.8% for the Far Western Development Regions. Among the sub regions, central hill led with a quarter, followed by central tarai with a fifth of the total GDP. Mountain sub regions of the Far Western, Mid Western, and Western Development Regions recorded the lowest GDP, as they had done 15 years earlier (Map 4).

The country's GDP increased by 6.4 times in nominal terms during the period FY1984/85–FY1999/2000. Surprisingly, the Far Western Region led with an increase of 9.1 times (Table 4). The Central Region came next with a 7.4 times increase. The Mid Western and Western Regions

Table 4: GDP by Sub region, 1984/1985 and 1999/2000

S.No.	Region Sub region	1984/85[a] NRs (million)	%	Rank	1999/2000[b] NRs (million)	%	Rank	Increase NRs (million)	Times
A	**FAR WESTERN**	**2,228**	**5.0**	**E**	**22,463**	**6.8**	**E**	**20,235**	**9.1**
1	Mountain	291	0.7	13	2,907	0.9	13	2,616	9.0
2	Hill	613	1.4	12	6,948	2.1	10	6,335	10.3
3	Tarai	1,324	3.0	8	12,608	3.8	9	11,284	8.5
B	**MID WESTERN**	**3,885**	**8.8**	**D**	**29,855**	**9.0**	**D**	**25,970**	**6.7**
4	Mountain	247	0.6	14	2,635	0.8	14	2,388	9.7
5	Hill	1,323	3.0	9	12,658	3.8	8	11,335	8.6
6	Tarai	2,315	5.2	7	14,562	4.4	7	12,247	5.3
C	**WESTERN**	**7,228**	**16.3**	**C**	**54,644**	**16.5**	**C**	**47,416**	**6.7**
7	Mountain	103	0.2	15	724	0.2	15	621	6.0
8	Hill	3,268	7.4	5	28,606	8.7	4	25,338	7.8
9	Tarai	3,857	8.7	4	25,314	.7	5	21,457	5.6
D	**CENTRAL**	**18,494**	**41.8**	**A**	**155,911**	**47.2**	**A**	**137,417**	**7.4**
10	Mountain	737	1.7	10	6,626	2.0	11	5,889	8.0
11a	Hill	8,571	19.4	3	82,651	25.0	1	73,990	8.6
12	Tarai	9,186	20.8	1	66,634	20.2	2	57,448	6.3
E	**EASTERN**	**12,432**	**28.1**	**B**	**67,391**	**20.4**	**B**	**54,959**	**4.4**
13	Mountain	676	1.5	11	5,627	1.7	12	4,951	7.3
14	Hill	2,813	6.4	6	19,531	5.9	6	16,718	5.9
15	Tarai	8,943	20.2	2	42,233	12.8	3	33,290	3.7
	NEPAL	**44,267**	**100.0**		**330,264**	**100.0**		**285,997**	**6.4**

Source: [a] National Planning Commission. 1989; table 2.1.
[b] United Nations Development Programme. 2002; p. 144, table A3.



both registered an increase of 6.7 times, while the Eastern Region trailed with a 4.4 times increase. Among the sub regions, far western hill gained most in GDP, with a 10.3 times increase. The next were mid western mountain and far western mountain. Central hill's increase of 8.6 times was close to mid western hill and far western tarai. The sub region with the lowest GDP increase was eastern tarai (3.7 times).

B. Spatial Disparity

The extent of the current disparity among the five development regions and 15 sub regions is presented on the basis of 11 select indicators. Of these, three are related to infrastructure, four to social, and four to economic sectors.

(i) Infrastructure: The indicators of infrastructure development used here are road length, airports, and hydropower generation (Table 5). Of the country's total road length of 13,223 kilometers, the Central Region leads with a share of 39.1%. The Eastern Region comes next with 22.6%, and the Far Western Region last with 8.6%. Central hill is the leading sub region with 18.2% of the total road mileage. The next sub region in road mileage is central tarai, followed by eastern tarai. Kathmandu Valley, with an area of 899 km^2, has more road mileage than the other 12 sub regions with roads. Mountain sub regions of the Mid Western and Western Regions, covering 27,170 km^2, do not have any roads (Map 5).

Of the 49 airports in the country, the Eastern and Mid Western Regions claim nearly a half, with 12 each; the Far Western Region has 10, the Central Region, 8, and the Western Region, 7. Among the sub regions, mid western mountain has the highest number, with 6 followed by eastern mountain, with 5. In general, there are more airports in the mountain and hill zones less served by roads as an alternative transport system.

The Central Region leads with more than half of the total hydropower generation. The next with such infrastructure is the Western Region. Hydropower generation from the other three regions is only about 5% of the total. Western hill is the leading sub region with 43.4% of the total generation. The next is central hill region. There is no such infrastructure in the tarai sub regions of the Far Western and the Mid Western Regions.

Table 5: Select Infrastructure Indicators

S.No.	REGION/Sub region	Road Length, 2001[a] Km.	%	Airport, 2002[b] Number	Hydropower Generation[c] KW	%
A	**FAR WESTERN**	**1,132**	**8.6**	**10**	**1600**	**0.3**
1	Mountain	59	0.4	3	700	0.1
2	Hill	524	4.0	4	900	0.2
3	Tarai	549	4.2	3	-	-
B	**MID WESTERN**	**1,697**	**12.8**	**12**	**13,895**	**2.5**
4	Mountain	-	-	6	900	0.2
5	Hill	720	5.4	4	12,995	0.4
6	Tarai	977	7.4	2	-	-
C	**WESTERN**	**2,236**	**16.9**	**7**	**239,490**	**43.6**
7	Mountain	-	-	2	365	0.1
8	Hill	1,409	10.7	4	238,101	43.4
9	Tarai	827	6.3	1	10,224	0.2
D	**CENTRAL**	**5,169**	**39.1**	**8**	**282,422**	**51.4**
10	Mountain	468	3.5	3	73,600	13.4
11a	Hill + KV[d]	2,401	18.2	1	193,822	35.3
11b	Hill - KV[d]	1,141	8.6	0	192,682	35.1
11c	KV[d] only	1,260	9.5	1	1,140	0.2
12	Tarai	2,300	17.4	4	15,000	2.1
E	**EASTERN**	**2,989**	**22.6**	**12**	**11,794**	**2.7**
13	Mountain	34	0.3	5	1,375	0.3
14	Hill	785	5.9	4	7,219	1.3
15	Tarai	2,170	16.4	3	3,200	0.6
	NEPAL	**13,223**	**100.00**	**49**	**549,201**	**100.0**

Sources: [a] Appendix C; [b] Civil Aviation Authority of Nepal, map; [c] Appendix D.
[d] Kathmandu Valley.

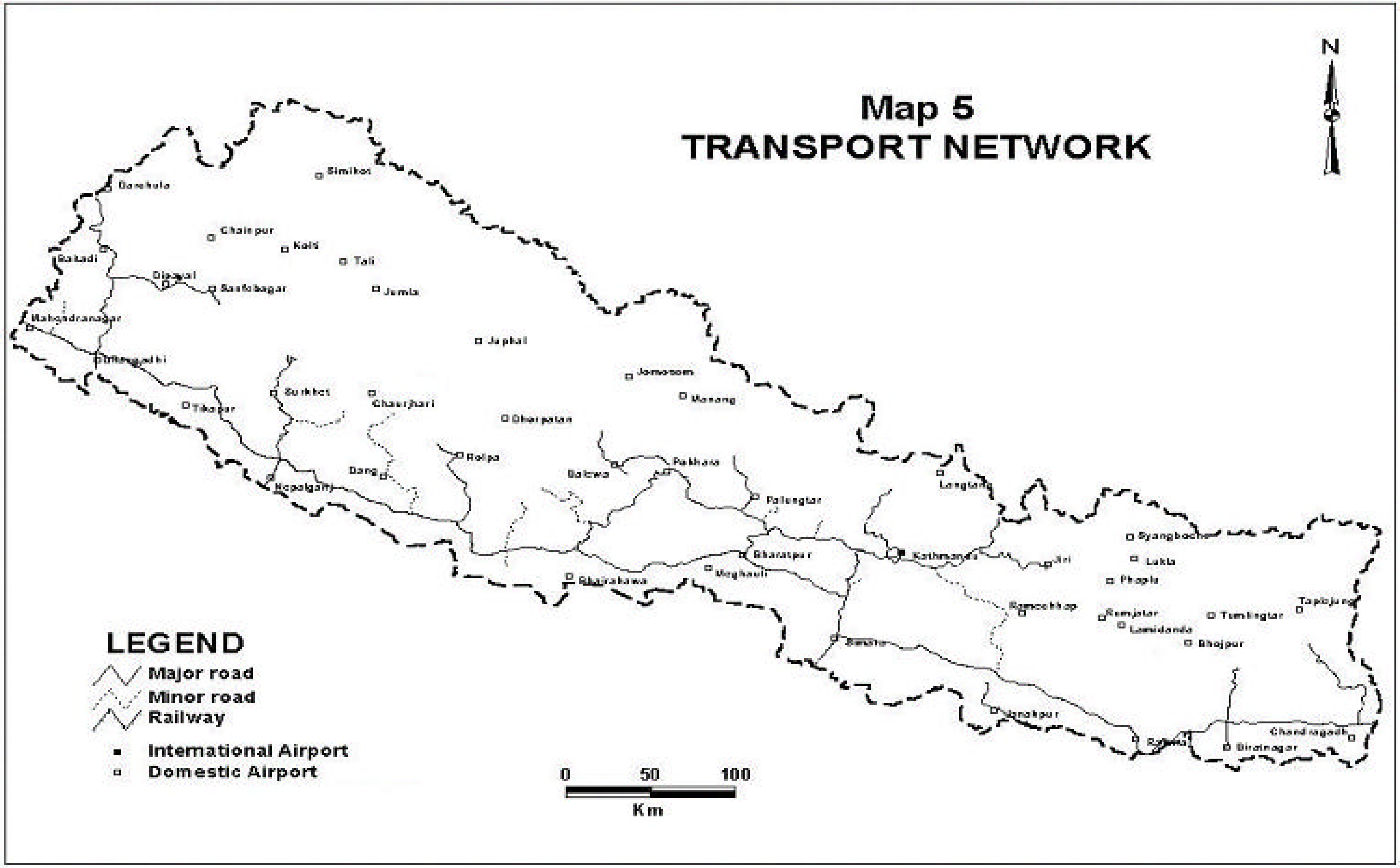

Map 5
TRANSPORT NETWORK
N
LEGEND
Major road
Minor road
Railway
International Airport
Domestic Airport
0
50
100
Km

Table 6: Select Social Indicators

S.No.	REGION/ Sub region	Literacy rate[a] 2001	Population/Health Institutions[b], 2001/02	HH with piped water[c], 2001	Human Development 2001
A.	**FAR WESTERN**	**46.7**	**5,332**	**49.1**	**0.404**
1	Mountain	39.5	3,343	59.8	0.355
2	Hill	44.8	3,583	54.4	0.403
3	Tarai	55.9	14,414	33.2	0.450
B.	**MID WESTERN**	**43.7**	**5,332**	**51.2**	**0.402**
4	Mountain	31.8	3,343	55.0	0.347
5	Hill	45.8	3,583	59.1	0.417
6	Tarai	53.5	14,414	39.4	0.440
C.	**WESTERN**	**56.6**	**4,980**	**71.7**	0.491
7	Mountain	55.8	2,273	88.9	0.488
8	Hill	60.3	4,270	79.2	0.489
9	Tarai	53.5	9,926	46.9	**0.494**
D.	**CENTRAL**	**48.1**	**6,294**	**63.2**	0.490
10	Mountain	41.6	3,626	82.8	0.427
11a	**Hill + KV[e]**	58.8	6,892	74.5	0.547
11b	Hill - KV[e]	51.8	5,115	58.1	0.466
11c	KV[e] only	72.2	11,504	73.9	0.612
12	Tarai	43.9	6,460	32.2	**0.451**
E.	**EASTERN**	**53.9**	**5,662**	**52.5**	0.493
13	Mountain	50.6	3,137	76.4	0.477
14	Hill	56.4	4,028	64.6	0.500
15	Tarai	54.7	8,087	16.4	**0.491**
	Nepal	**53.7**	**5,588**	**57.5**	**0.471**

Source: [a] Appendix E; [b] Appendix F; [c] Appendix G; [d] Appendix H.
[e] Kathmandu Valley.

(ii) Social: The indicators of social development taken are literacy rate, population per health institution, households with piped water, and human development index (Table 6). According to the population census 2001, Nepal's adult literacy rate was 53.7%. Among the five development regions, the Western (56.6%) and the Eastern (53.9%) exceed the national average (Map 6), while the Mid Western has the lowest literacy rate (43.7%). The sub region with highest literacy rate is western hill (60.3%), followed by central hill (58.8%). Mid western mountain, with 31.8% literacy rate, is ranked at the bottom.

The national average ratio between health institution and population is 1:5,588 (Table 6). This varies from 1:5,332 for the Far Western, to 1:6,294 for the Central Region (Map 7). All three development regions west of Kathmandu have a lower population/health institution ratio than the national average. The sub region with the lowest population per health institution is western mountain while central hill presents the reverse case. Despite the favorable situation indicated for mountain and hill sub regions in terms of such a ratio, they are handicapped by poor access to health services.

The number of households with access to piped water supply is reported to be 57.5% at the national level (Table 6). The Western Region leads with 71.7% of households with such a facility. The Central Region comes next with 63.2%. The other three regions register numbers below the national average, the lowest being for the Far Western Region (49.1%). Western mountain (88.9%) and central mountain (82.8%) are the better placed among the sub regions as regards such facilities (Map 8). With the exception of the Mid Western Region, all regions have a pattern of better piped water access with increasing elevation zone. The sub region with the lowest access to piped water is eastern tarai (16.4%), which is traditionally dependent on tube-wells.

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The latest human development index (HDI) estimated for the country is 0.461 (Table 6 and Map 9). Accordingly, the HDI value by development regions decreases westward from the Eastern Region (0.485) to the Far Western Region (0.393). In terms of sub regions, central hill supercedes all with 0.537, of which Kathmandu Valley alone contributes with 0.610. Those with low HDI values are the far western hill, far western mountain, and mid western mountain sub regions.

(iii) Economic: The indicators included to compare economic status across regions and sub regions are registered land, land holding, industrial asset, and per capita income in terms of PPP (purchasing power parity) (Table 7). The country has 6 million hectares of land registered through cadastral survey. The proportion of such land by regions is progressively higher from the drier west to the humid east (Map 10). Thus, the Eastern Region has 27% and the Far Western Region only 12.7%. Among the sub regions, western hill leads with 16.1%, followed by mid western hill and eastern hill, each with 12.7%. Western mountain's share is less than 1%, while the small Kathmandu Valley accounts for 1.2%.

The total operating land holding reported is 2.7 million hectares (Table 7). This comes to 43.7% of the registered land. Such a wide divergence in area indicates that a considerable extent of registered land is either nonfarm or left fallow. The regional distribution of land holding has a pattern similar to that of registered land (Map 11); that is, progressive increase of proportion from the west to the east. The Far Western Region has only 8.5% compared to the 30% of the Eastern Region. Eastern tarai leads among the sub regions, with 17.7% of the total land holding. Central tarai comes next, followed by western tarai. Western mountain, as in the case of registered land, has the least share in such a holding.

The total asset of industrial establishments comes to NRs 39 billion (Table 7). The disparity is most pronounced in the regional pattern of such investment (Map 12). Thus, the Central Region claims 74.8% of the total industrial asset, of which Kathmandu Valley alone accounts for 61.2% . The Eastern Region comes next, with a 15.3% share. The Western Region has 7.5%, while the share of the Mid Western and the Far Western Regions are only nominal. Among sub regions,

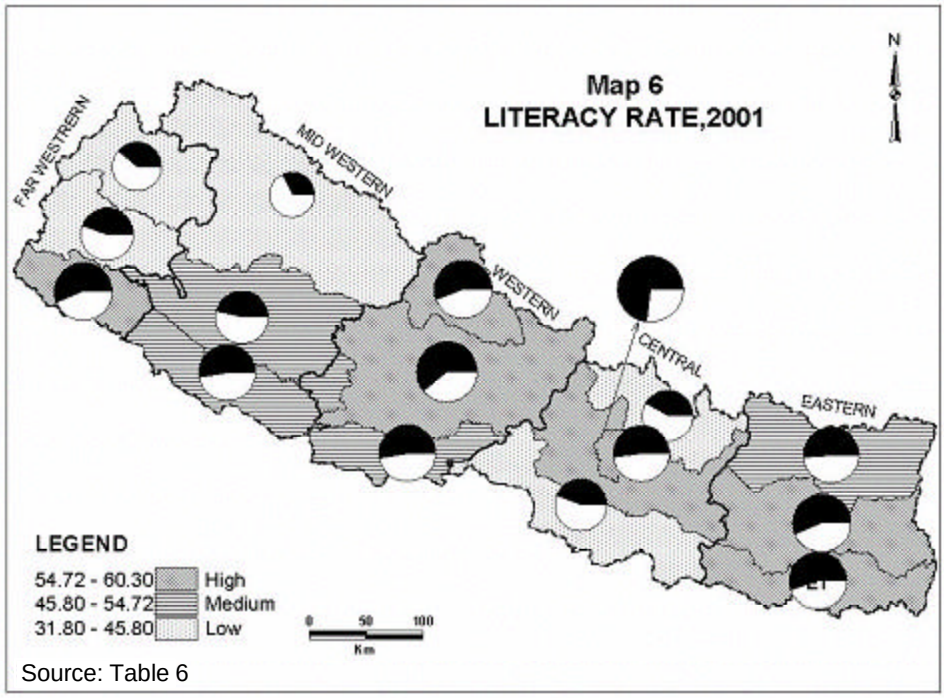
central hill leads with 64.3%. The next sub regions are eastern tarai (14.6%) and central tarai (10.5%). There is no such industrial investment in far west hill, mid west mountain, and west mountain sub regions.

The per capita income in terms of PPP for the country is estimated at $1,310 (Table 7). It is only the Central Region, with $1,597, that exceeds the national average (Map 13). The Western Region comes second ($1,254), and the Eastern Region third ($1,202) in rank. The Mid Western Region has the lowest per capita income ($988). Surprisingly, western mountain leads all sub regions in per capita income ($2,505); this could be partly due to tourism activity. The sub region with the second highest per capita income is central hill, mainly due to the very high income for Kathmandu Valley ($2,458). The next group includes most of the tarai sub regions, which are better
off than their adjoining hill sub regions. Mountain and hill sub regions of the Far Western and the Mid Western Regions have the lowest per capita income, the least being for mid western hill ($ 879).

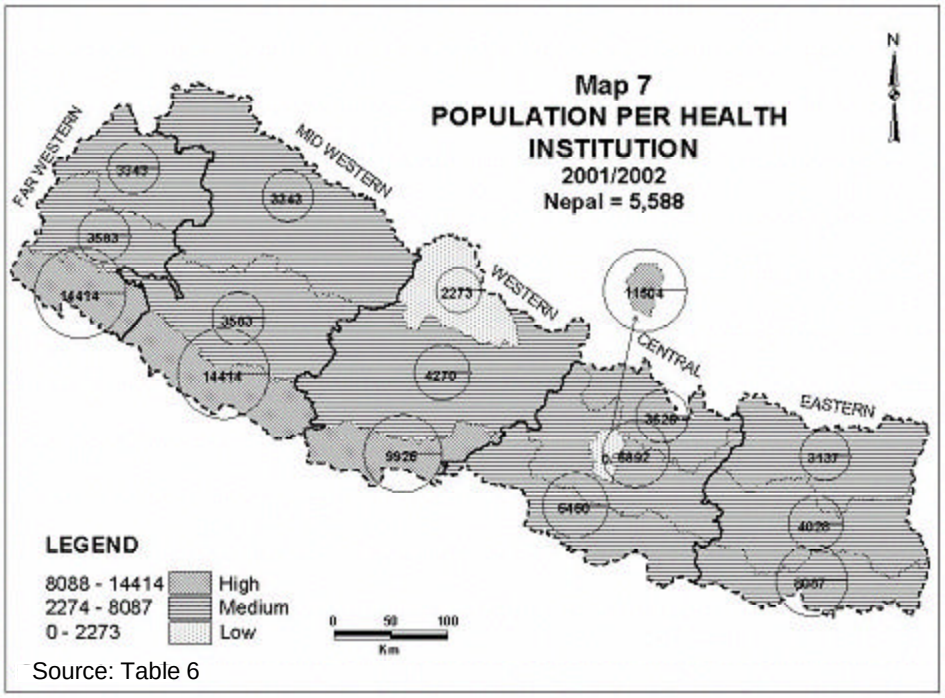
Table 7: Select Economic Indicators

S.No.	REGION/ Sub region	Registered Land[a] ha.' 000	%	Land Holding[b] ha.' 000	%	Industrial Asset[c] NRs Million	%	Per Capita Income (PPP)[d] US dollar
A.	**FAR WESTERN**	**771.9**	**12.7**	**225.4**	**8.5**	**992,908**	**0.5**	**1,079**
1	Mountain	288.5	4.7	40.3	1.5	269	0.0	939
2	Hill	374.0	6.2	70.6	2.7	-	-	945
3	Tarai	109.4	1.8	114.6	4.3	992,639	0.4	1,244
B.	**MID WESTERN**	**1,110.7**	**18.3**	**370.7**	**14.0**	**47,908**	**1.9**	**988**
4	Mountain	150.0	2.5	38.8	1.5	-	-	940
5	Hill	774.7	12.7	171.7	6.5	11,549	0.0	879
6	Tarai	186.0	3.1	160.2	6.0	36,359	1.9	1,130
C.	**WESTERN**	**1,267.0**	**20.9**	**512.2**	**19.3**	**5,724,640**	**7.5**	**1,254**
7	Mountain	26.4	0.4	2.4	0.1	-	-	2,505
8	Hill	981.2	16.1	302.8	11.4	634,939	0.7	1,198
9	Tarai	259.5	4.3	207.0	7.8	5,089,701	6.8	1,277
D.	**CENTRAL**	**1,283.3**	**21.1**	**750.2**	**28.6**	**21,002,198**	**74.8**	**1,597**
10	Mountain	273.2	4.5	67.8	2.6	255,037	0.0	1,157
11a	Hill + KV[e]	497.4	8.2	237.0	8.9	10,247,721	64.3	2,083
11b	Hill – KV[e]	425.5	7.0	208.0	7.8	2,252,175	3.1	1,115
11c	KV[e] only	71.9	1.2	29.0	1.1	7,995,546	61.2	2,458
12	Tarai	512.7	8.4	445.4	16.8	10,499,440	10.5	1,222
E.	**EASTERN**	**1,643.3**	**27.0**	**795.5**	**30.0**	**12,152,266**	**15.3**	**1,202**
13	Mountain	357.7	5.9	69.4	2.6	867	0.0	1,276
14	Hill	771.7	12.7	256.6	9.7	1,711,407	0.6	1,057
15	Tarai	513.9	8.5	469.5	17.7	10,439,992	14.6	1,266
	Nepal	**6,076.2**	**100.0**	**2,654.0**	**100.0**	**39,919,920**	**100.0**	**1,310**

Sources: [a] Appendix I; [b]Central Bureau of Statistics. 2003; p.22, table 5; [c] Appendix K; [d]Appendix L.
[e]Kathmandu Valley.



Source: Table 6



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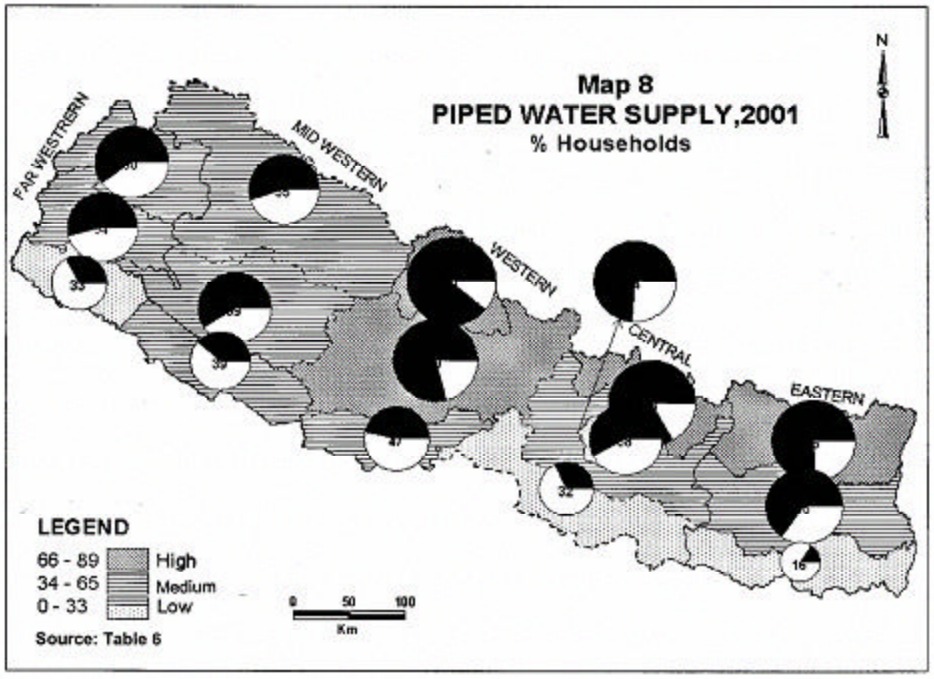
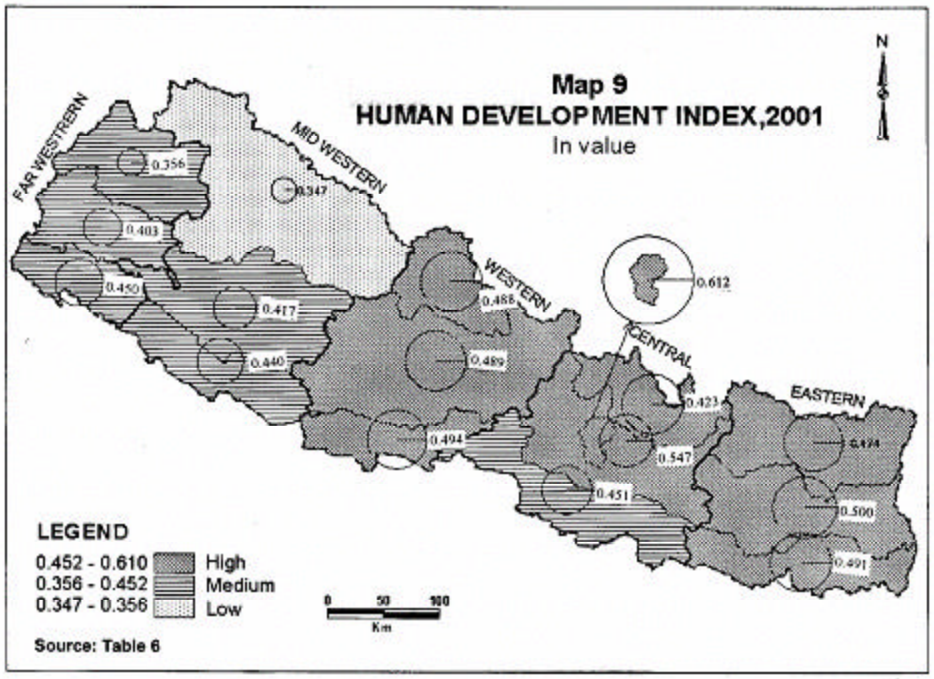
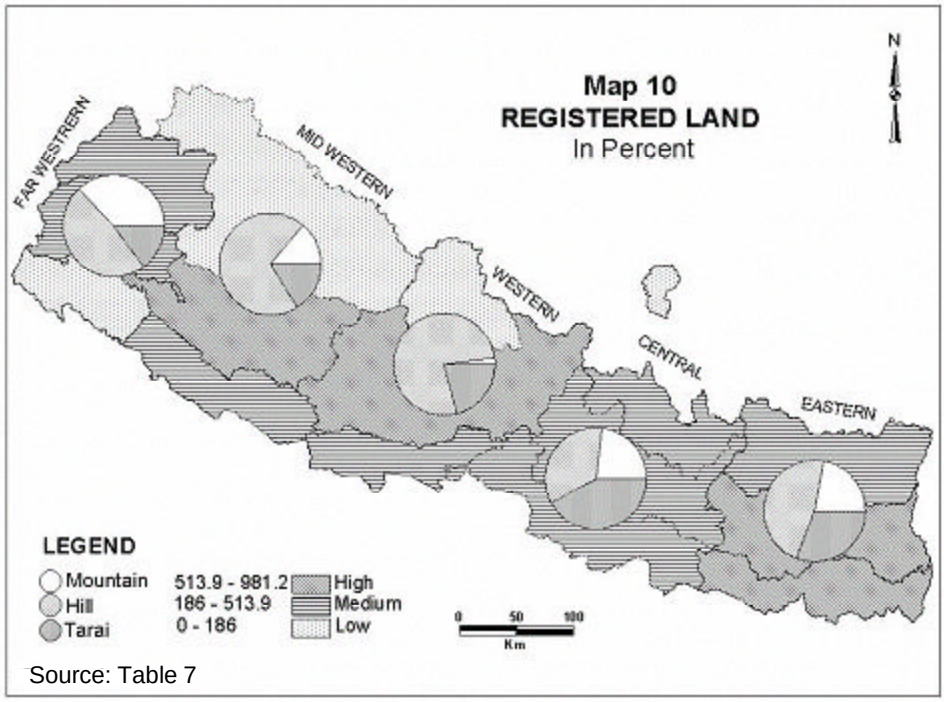
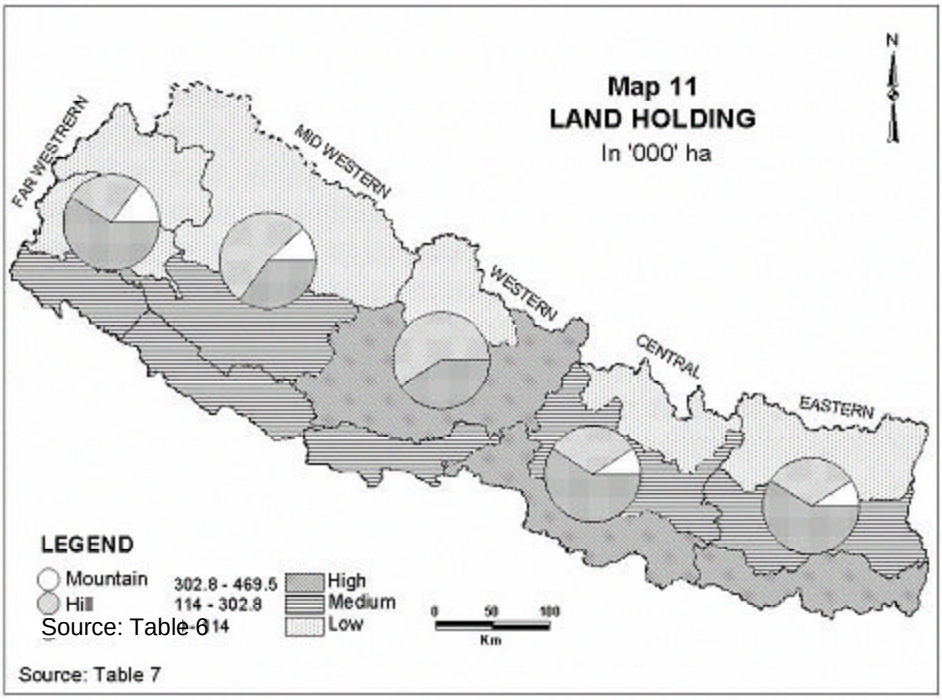

Map 8
PIPED WATER SUPPLY,2001
% Households
N
FAR WESTRERN
MID WESTERN
WESTERN
CENTRAL
EASTERN
LEGEND
66 - 89 High
34 - 65 Medium
0 - 33 Low
0 50 100
Km
Source: Table 6


Map 9
HUMAN DEVELOPMENT INDEX,2001
In value
N
FAR WESTRERN
MID WESTERN
WESTERN
CENTRAL
EASTERN
0.356
0.347
0.403
0.450
0.417
0.440
0.488
0.489
0.612
0.423
0.494
0.547
0.451
0.500
0.491
LEGEND
0.452 - 0.610 High
0.356 - 0.452 Medium
0.347 - 0.356 Low
0 50 100
Km
Source: Table 6

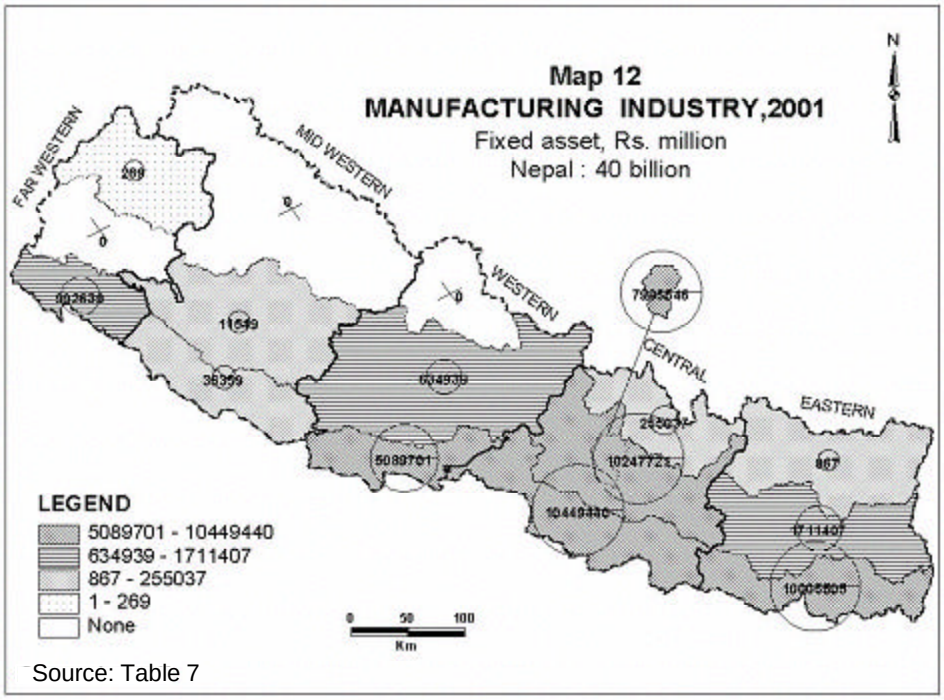


Source: Table 7

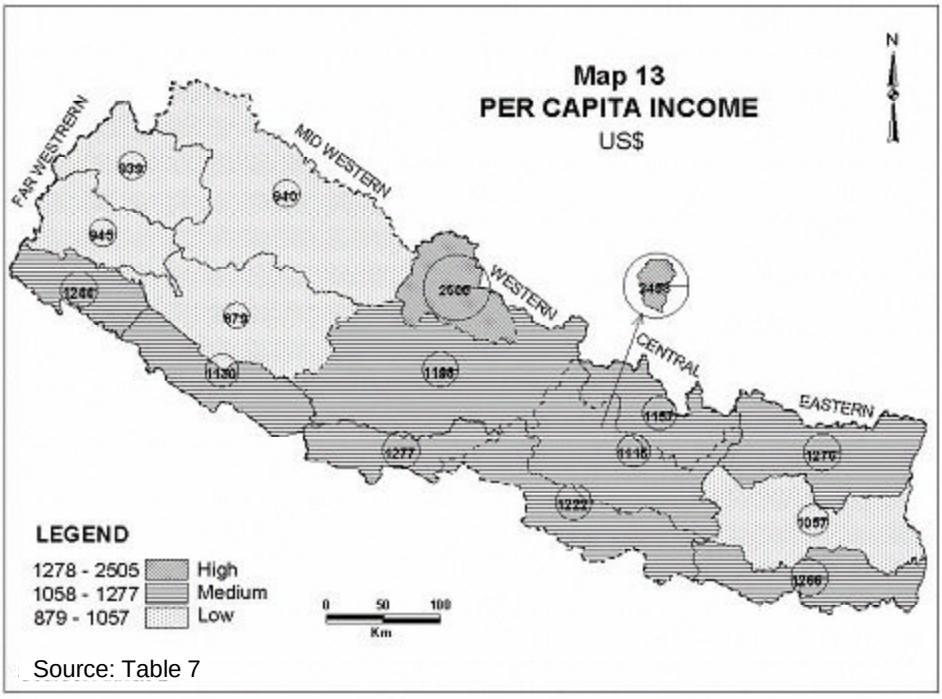


Source: Table 6

Source: Table 7



Source: Table 7



Source: Table 7

IV. EMERGING PATTERN

Economic development without spatial consideration may induce population redistribution with major consequences. This is what has happened in the case of Nepal.[23] Before planning started in Nepal, the tarai plain in 1952/54 had 29.1% of the total population. According to the census 2001, the tarai now supports 44.5% of the total population. During the period 1952/54–2001, the population of the country increased 2.8 times; however, the population of the tarai increased 4.3 times. This was mainly due to migration from the economically depressed highlands to the lowlands as a spatial adjustment between population and resources.

A. Demographic Shift

The volume of inter-regional migration doubled from 1.0 million in 1981 to 2.0 million in 2001. This migratory trajectory has been directed mainly from the hill to the tarai (Map 14). All five tarai sub regions gained in population through net migration (Table 8). The situation was reverse for all mountain and hill sub regions except central hill, due to the net gain of Kathmandu Valley. The largest volume of out-migration originated in western and eastern hills, while their adjoining tarai sub regions had the largest net gain.

Inter-regional migration by development regions indicates the broad pattern of such population shift. Of the total out-migration, a third was from the Eastern Region and one-fourth from the Western (Table 8). That from the Central Region was one-fifth, while that from the Mid Western was 10%. The Central Region claimed a third of all in-migration while a quarter was destined to the Eastern Region. The Mid Western Region had the lowest in-migration among the development regions. The Western Region experienced a net loss of 161,577, and the Eastern of 152,420 through migration. The Central Region had a net gain of 264,737, mainly through in-migration into Kathmandu Valley. Without this surplus, the Central Region would be a net loser (-130,082). The Mid Western Region was a net loser, while the Far Western Region was a net gainer, an indication of the trajectory directed to the low density far western tarai.

The consequence of such migration was varying rate of population growth across the regions and sub regions (Map 15). Nepal's growth rate of population during 1991-2001 averaged 2.25 per annum. The Central Region led with 2.61, while the Eastern had the lowest of 1.84 (Table 9). The Western Region had a lower growth than the national average, while that of the Far Western and Mid Western Regions were just above the average. Far western tarai had the highest growth rate (3.86) among the sub regions. The sub regions with the next highest growth rates were mid western tarai and western tarai, followed by central tarai.

[23] Gurung H. 1989b. *Regional Patterns of Migration in Nepal*. Honolulu: East-West Centre.

Table 8: Inter-Regional Migration, 2001

S.N.	REGION/ Sub region	In-Migration Number	%	Out-Migration Number	%	Net Migration Number
A.	**FAR WESTERN**	**306,129**	**14.95**	**254,340**	**12.42**	**+51,789**
1	Mountain	8,353	0.41	58,123	2.84	-49,770
2	Hill	18,394	0.90	182,933	8.94	-164,539
3	Tarai	279,382	13.65	13,284	0.65	+266,098
B.	**MID WESTERN**	**201,710**	**9.85**	**204,239**	**9.98**	**-2,529**
4	Mountain	2,710	0.13	23,139	1.13	-20,429
5	Hill	34,711	1.70	136,983	6.69	-102,272
6	Tarai	164,289	8.02	44,117	2.15	+120,172
C.	**WESTERN**	**351,970**	**17.19**	**513,547**	**25.08**	**-161,577**
7	Mountain	3,716	0.18	4,977	0.24	-1,261
8	Hill	54,442	2.66	470,994	23.01	-416,552
9	Tarai	293,812	14.35	37,576	1.84	+256,236
D	**CENTRAL**	**665,595**	**32.51**	**400,858**	**19.58**	**+264,737**
10	Mountain	11,991	0.59	81,145	3.96	-69,154
11a	Hill + KV[a]	362,536	17.71	176,882	8.64	+185,654
11b	Hill - KV[a]	32,733	1.60	92,841	4.53	-60,108
11c	KV[a] only	329,803	16.11	84,041	4.10	+245,762
12	Tarai	291,068	14.22	142,831	6.98	+148,237
11	**EASTERN**	**521,946**	**25.49**	**674,366**	**32.94**	**-152,420**
13	Mountain	15,957	0.78	130,446	6.37	-114,489
14	Hill	70,330	3.44	403,380	19.70	-333,050
15	Tarai	435,659	21.28	140,540	6.86	+295,119
	NEPAL	**2,047,350**	**100.00**	**2,047,350**	**100.00**	**0**

[a] Kathmandu Valley.
Source: Central Bureau of Statistics, Census 2001.

Table 9: Select Demographic Indicators

S.N.	REGION/ Sub region	Pop. Growth Rate[a] 1991-2001	Pop. Density[b] 2001, Km^2	Pop. Pressure Index[c] 2001
A.	**FAR WESTERN**	**2.26**	**127.6**	**0.85**
1	Mountain	1.78	50.7	0.84
2	Hill	1.75	119.0	0.85
3	Tarai	3.86	213.0	-3.38
B.	**MID WESTERN**	**2.26**	**103.3**	**13.38**
4	Mountain	1.71	23.8	1.26
5	Hill	1.89	116.1	0.39
6	Tarai	2.80	170.0	-2.18
C.	**WESTERN**	**1.92**	**179.5**	**-5.01**
7	Mountain	2.23	4.0	-13.09
8	Hill	1.43	181.8	1.56
9	Tarai	2.76	352.7	-3.56
D.	**CENTRAL**	**2.61**	**252.1**	**1.29**
10	Mountain	1.64	80.7	0.63
11a	Hill + KV[d]	2.79	224.3	1.07
11b	Hill - KV[d]	1.78	186.7	-
11c	KV[d] only	4.23	1,829.9	23.34
12	Tarai	2.60	451.4	-3.01
E.	**EASTERN**	**1.84**	**217.0**	**-0.80**
13	Mountain	1.12	38.7	0.24
14	Hill	1.40	156.0	0.46
15	Tarai	2.16	456.2	-3.09
	Nepal	**2.25**	**175.9**	**1.60**

[d]. Kathmandu Valley
Source: [a] Appendix M; [b] Appendix N; [c] New ERA. 2003, map 25.

Nepal's average population density in 2001 was 175.9 persons per square kilometer (Table 9). Among the development regions, the Central Region had the highest (252), and the Mid Western the lowest (103). The population density of the Eastern and Western Regions exceeded the national average. Eastern tarai and central tarai had the highest density among sub regions, exceeding 450 persons per km^2 (Map 16). Western tarai came next with a density of 343 persons per km^2. Western mountain had only 4 persons per km^2, while that of far western mountain and mid western mountain were 51 and 24 persons per km^2 respectively. Among hill sub regions, central hill had the highest density followed by western hill. The population density of Kathmandu Valley was 1830 per km^2.

The estimation of population pressure index (PPI) is based on calories available from five basic crops and potato.[24] The 15 sub regions can be categorized into four groups according to the

PPI value. The value categories are 1.07 to 1.58 (fairly high), 0.24 to 0.85 (moderately high), -2.18 to -3.56 (low) and -13.09 (extremely low) (Table 9). The three sub regions in the fairly high category are western hill, mid western mountain, and central hill (Map 17). The six with moderately high PPI are all in the highlands: three mountain and three hill sub regions. All five tarai sub regions fall in the low PPI category. As an exception, western mountain has extremely low PPI (-13.09). In contrast, Kathmandu Valley in central hill has an extremely high PPI (23.34).

The low population pressure in the tarai is due to extension of agricultural land as most of the inter-regional migration has been rural to rural. This is apparent from the pattern of land use change in recent decades. Since 1963/64, tarai plains have lost 31.9% in forest and shrub land and gained 47.2% in agricultural and grass land (Table 10). Forest land depletion has been most extensive in the eastern and central tarai from whence the East-West Highway construction commenced. On the other hand, agricultural land expansion has been more pronounced in the far western tarai, which has become the new destination of migrants from various sub regions (Map 14) and contributing to the highest growth rate (Map 15).

Table 10: Land Use Change in Tarai, 1963/64 - 2000

SECTION	1963/64[a] Hectare	2001[b] Hectare	Change Hectare	Change %
FAR WESTERN				
Forest + shrub	631,800	489,490	-142,310	-22.5
Agri. + grass	112,845	358,991	+246,146	+218.1
WESTERN				
Forest + shrub	240,293	191,463	-48,830	-20.3
Agri. + grass	211,323	308,707	+97,384	+46.1
EASTERN + CENTRAL				
Forest + shrub	654,298	358,074	-296,224	-45.3
Agri. + grass	826,028	1,024,979	+198,951	+24.1
TOTAL				
Forest + shrub	1,526,391	1,039,027	-487,364	-31.9
Agri. + grass	1,150,196	1,692,677	+542,481	+47.2

Sources: [a]Forest Resources Survey. 1967; p 17; [b]Japan Forest Technology Association. 2001; pp. 30–31 and summarized in Appendix Q.

B. Development Level

Regions and sub regions vary in their level of development over time according to the methodology used as exemplified here by four sample data. The first exercise was made on

[24] New ERA. 2003. Study Report on Population Pressure Index (PPI) in Nepal. Kathmandu: UNFPA.

the basis of 40 socioeconomic variables with reference to data of 1977.[25] Eastern tarai was ranked first among the 15 sub regions (Table 11). Central tarai came next, followed by central hill in the third place (Map 18). All tarai sub regions were ranked higher than hill and mountain sub regions. Mid western mountain was ranked 14th and far western mountain 15th. Among the five development regions, the Central Region led all the others in development level. This was mainly due to the high value for Kathmandu Valley (2,327). The Eastern Region was ranked second, and the Western Region third. The Mid Western Region was ranked the lowest.

Table 11: Levels of Development, 1977, 1984/85 and 2001

S.No.	REGION/ Sub region	Regional Development 1977[a] Value	Rank	Development Level 1984/85[b] Value	Rank	Composite Development Index, 2001[c] Value	Rank	Composite Indicators, 2001[d] Value	Rank
A.	**FAR WESTERN**	**1,160**	**D**	**658.5**	**D**	**0.36**	**E**	**0.2359**	**E**
1	Mountain	714	XV	251.0	XIV	0.26	XIV	0.1677	XV
2	Hill	1,056	XII	224.0	X	0.30	XIII	0.2574	XIII
3	Tarai	1,710	V	183.5	VII	0.52	VIII	0.2826	XII
B.	**MID WESTERN**	**1,039**	**E**	**679.5**	**E**	**0.39**	**D**	**0.2771**	**D**
4	Mountain	714	XIV	278.5	XV	0.22	XV	0.1877	XIV
5	Hill	800	XIII	225.5	XI	0.40	XII	0.3569	VI
6	Tarai	1,603	VI	175.5	V	0.55	VII	0.2866	XI
C.	**WESTERN**	**1,470**	**C**	**532.0**	**A**	**0.56**	**A**	**0.4363**	**B**
7	Mountain	1,166	IX	192.0	IX	0.60	I	0.3208	VIII
8	Hill	1,521	VII	180.0	VI	0.58	II	0.6741	II
9	Tarai	1,724	IV	160.0	III	0.50	IX	0.3141	IX
D	**CENTRAL**	**1,587**	**A**	**528.0**	**B**	**0.47**	**C**	**0.5086**	**A**
10	Mountain	1,159	X	249.5	XIII	0.44	X	0.2963	X
11	Hill + KV[e]	1,730	III	115.0	I	0.57	III	0.7420	I
12	Tarai	1,873	II	163.5	IV	0.41	XI	0.4876	IV
E	**EASTERN**	**1,506**	**B**	**554.0**	**C**	**0.55**	**B**	**0.4332**	**C**
13	Mountain	1,142	XI	233.0	XII	0.56	V	0.3426	VII
14	Hill	1,375	VIII	186.0	VIII	0.56	IV	0.4602	V
15	Tarai	2,002	I	153.0	II	0.55	VI	0.4970	III
	NEPAL	**1,353**				**0.47**		**0.3782**	

Source: [a]Appendix O; [b]National Planning Commission. 1987; p. 37, table 19; [c]Appendix P; [d]Tables 5, 6 and 7.
[e]Kathmandu Valley

[25] Shrestha, R.K. and P. Sharma. 1980. *Nepal: Atlas of Economic Development.* Kathmandu: NCST.

The second exercise refers to rank-order matrix using 25 socioeconomic indicators to assess levels of regional development for the FY1984/85.[26] Accordingly, central hill was ranked first and eastern tarai second among the sub regions (Table 11). Except in the Central Region, all tarai sub regions were ranked higher than their adjoining hill sub region. All mountain sub regions were ranked low, with the mid western mountain ranked the lowest. Among the development regions, the Western Region led, followed by the Central. The Mid Western Region, as in 1977, remained the least developed.

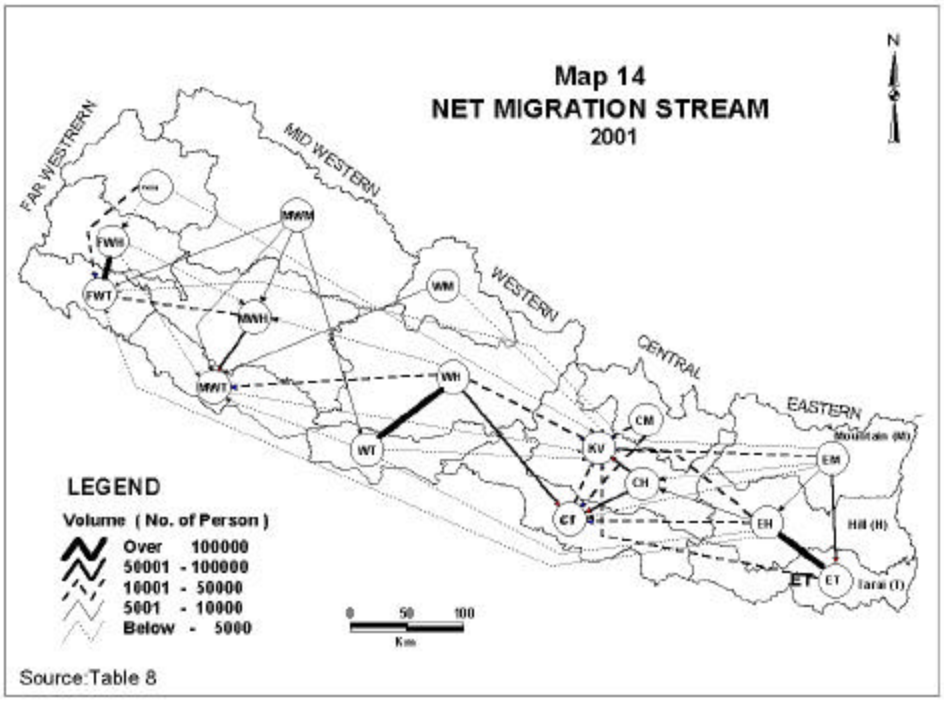
A recent exercise on indicators of development at the district level provides comparative data for regional comparison.[27] The indicators used were indexes of (i) economic/infrastructure development, (ii) empowerment, and (iii) poverty. According to the derived composite value of development, western mountain, which was ranked ninth both in 1977 and FY1984/85, is ranked first among the sub regions (Table 11). Western hill, which was sixth in the earlier two exercises, is ranked second. Central hill (including Kathmandu Valley) is ranked third. Mid western mountain is ranked last, followed by far western mountain. Unlike in the earlier years, there is no general dominance of tarai sub regions over their adjoining hill sub regions. The Western Region leads among the development regions, as in FY1984/85, and the Eastern Region is placed second. The Far Western Region emerges as the least developed region in place of the Mid Western.

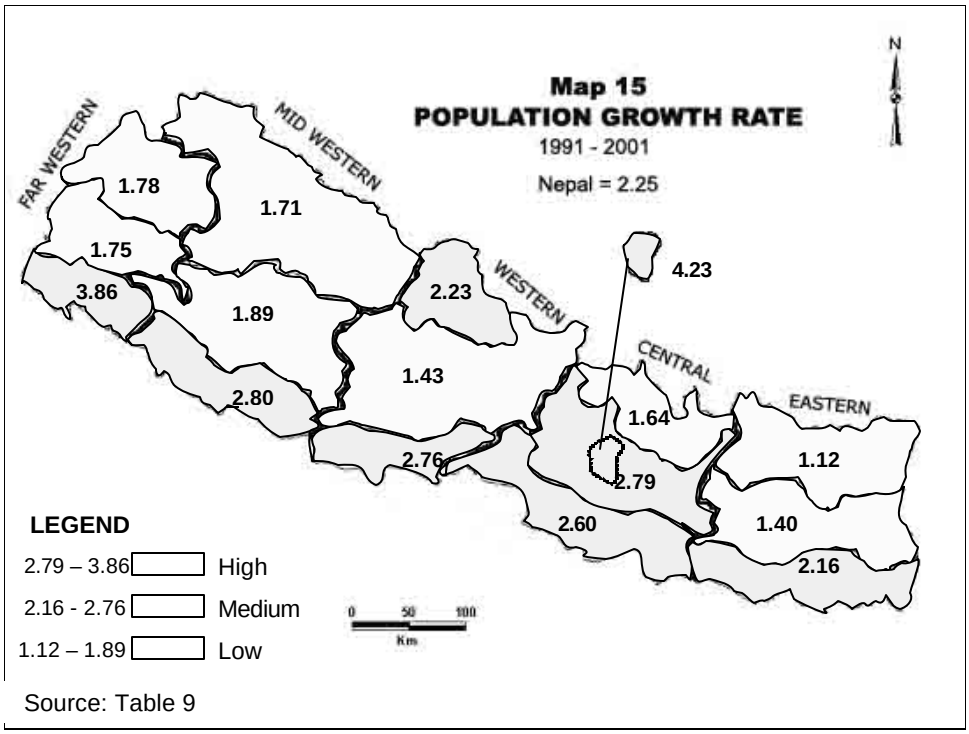
The present study has used 11 infrastructural, social, and economic indicators to assess regional disparity (Tables 5, 6 and 7). The composite value of these indicators places central hill as the top ranked followed by western hill (Table 11 and Map 19). The other sub regions exceeding the average composite value are eastern tarai, central tarai, and eastern hill. Mountain sub regions of the Mid Western and the Far Western Regions are ranked 14th and 15th respectively. Among development regions, as in 1977, the Central ranks first. The second place is taken by the Western Region superseding the Eastern. The Far Western Region now ranks last, replacing the Mid Western, which was placed so in 1977.

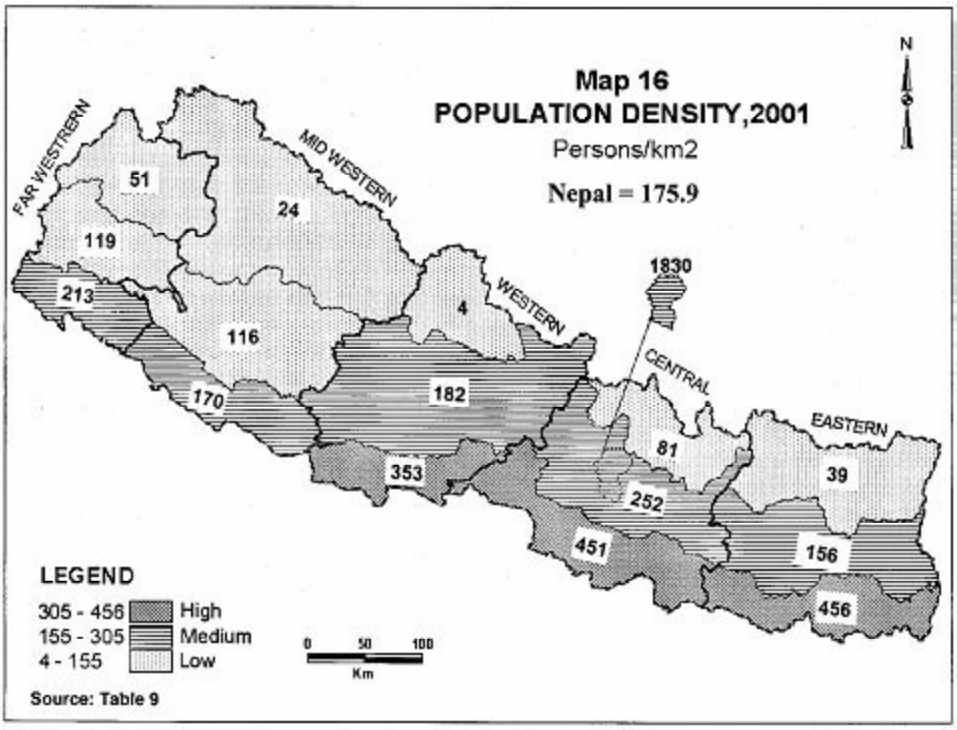
What is the emerging pattern of regional level of development over the quarter century? In 1977, those with high level of development included three tarai and two hill sub regions. By 2001, such level of development included three hill and two tarai sub regions. There were no tarai sub regions in the low value category in 1977. In 2001, two tarai sub regions fall in such category. That central hill replaced eastern tarai in the top rank, and western hill eastern tarai in the second indicates a spatial shift in development level by elevation zone. There has been no change in the ranking of central mountain (10th), mid western mountain (14th), and far western mountain (15th). According to the development regions, the Central Region led both in 1977 and 2001; the Western replaced the Eastern in the second place, and the Mid Western Region replaced the Far Western in the fourth.

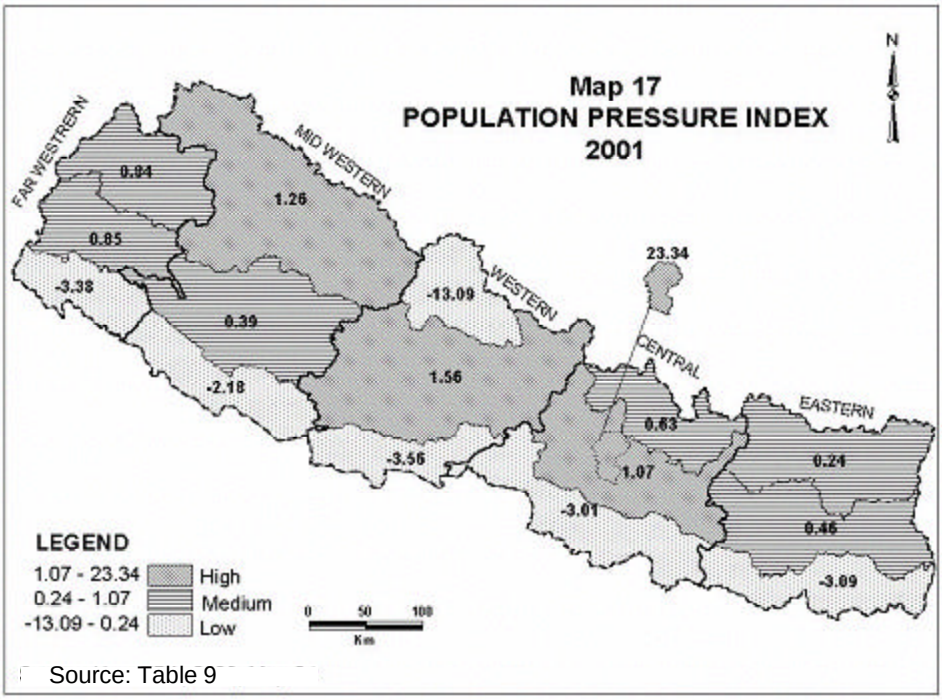
[26] National Planning Commission. 1987. Chhetriye Bikashko Sthiti (Status of Regional Development). Draft in Nepali. Kathmandu: Mimeo, 40 pages.

[27] International Center for Integrated Mountain Development (ICIMOD). 2003. *Districts of Nepal: Indicators of Development, Update 2003*. Kathmandu.

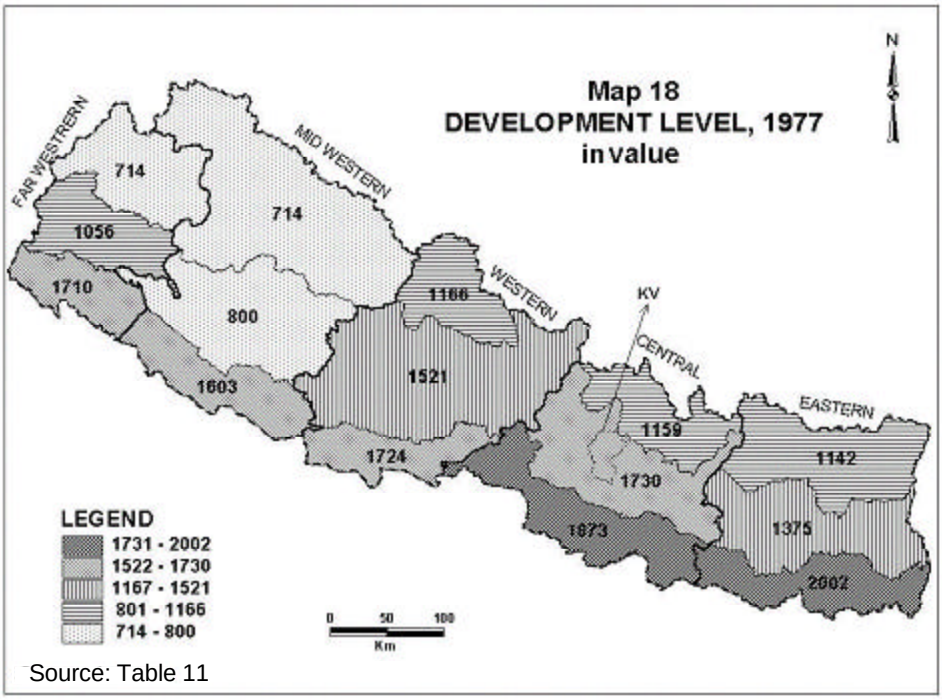

Map 14
NET MIGRATION STREAM
2001
N
FAR WESTRERN
MID WESTERN
WESTERN
CENTRAL
EASTERN
LEGEND
Volume (No. of Person)
Over 100000
50001 - 100000
10001 - 50000
5001 - 10000
Below - 5000
0 50 100
Km
Source:Table 8


Map 15
POPULATION GROWTH RATE
1991 - 2001
Nepal = 2.25
N
FAR WESTERN
MID WESTERN
WESTERN
CENTRAL
EASTERN
1.78
1.71
1.75
3.86
1.89
2.23
4.23
1.43
2.80
1.64
2.76
2.79
1.12
2.60
1.40
2.16
LEGEND
2.79 – 3.86 High
2.16 - 2.76 Medium
1.12 – 1.89 Low
0 50 100
Km
Source: Table 9

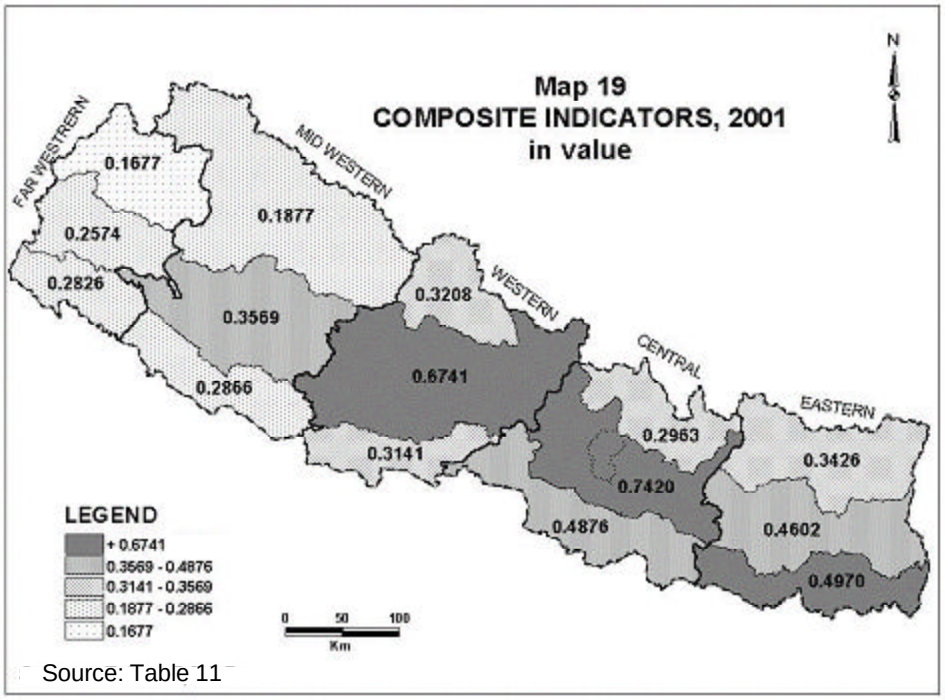




Source: Table 9



Source: Table 11



Source: Table 11

V. SPATIAL FRAMEWORK

Development planning has to encompass the totality of national space since regions vary in natural endowment and human resources. Regional approach should address their interrelationship into a coherent spatial framework for growth and equity. This chapter deals with four significant aspects for regional strategy in national planning: (a) land use, (b) road infrastructure, (c) industrial location, and (d) urban system.

A. Land Use

Economic activity is determined by the type of land resources available. With the exception of a rare case of a policy statement in the Fifth Plan (1975–80), Nepalese plans have entirely overlooked the aspect of land use. Even the Agricultural Perspective Plan that makes a strong case for linking agriculture productivity with road access makes no reference to this crucial basis of agriculture. Since land use data have been very little used in planning, there has been persistent conflict among the various sectoral master plans, be they of agriculture, forestry or irrigation.[28] For instance, the tarai has been much emphasized both for agriculture and forestry but has undergone significant land use change since the commencement of the malaria control program in late 1950s. During the period 1963/64–2000, the tarai experienced a decrease of 31.9% in forest land against an increase of 47.2% in agricultural land (Appendix R). The cause was in-migration, and the consequence was progressive accentuation of population from the east to far western tarai.

The first scientific assessment of Nepal's land use status was made available through the Land Resources Mapping Project (LRMP).[29] The LRMP data, based on aerial photographs taken during 1977/78 and mapped at scale of 1:50,000, are available by physiographic regions at the district level. Unfortunately, the designation of some physiographic regions is inappropriate.[30] In fact, the so-called 'High Himalaya' and 'High Mountain' can be collapsed into the mountain zone, while 'Middle Mountain' actually corresponds to the hill zone (Table 12A and Appendix R). The 'Siwalik' refers to the foothill zone, including the inner tarai. According to the LRMP data, 42.8% of total land surface of Nepal was categorized as forest land. The remaining major land use categories were agriculture (cultivated) 20.1%, agriculture (non-cultivated) 6.7%, 'grazing'[31] 11.9%, and others 18.5% (Table 12A). Forest land was distributed as 34.9% in hill zone, 32.8% in foothill and tarai, and 32.3% in mountain zone. The hill and tarai zones each had a share of 41% of cultivated land. Over two-thirds of non-cultivated agricultural land was confined to the hill zone. Of the 2.9 million hectares of cultivated land, 28.3% was in the Eastern Region (Table 12B). The Central Region had over one-fourth and the Western Region a fifth (Map 20). The Far Western Region had only about 10% of such land. The proportion of non-cultivated agricultural land similarly increased progressively from west to east. 'Grazing land' was very extensive in the Mid Western Region, while it was less important in the Central Region. The Mid Western Region also led in forest land as well as in the 'others' type of land use category.

[28] Gurung, H. 2000. Nepal: Land use in mountain environment. *Environment and Agriculture.* Jha, P.K. et al. eds. Kathmandu: ECOS: 269–280.

[29] Kenting Earth Sciences. 1986. Land Resources Mapping Project: Economics Report. Kathmandu.

[30] Gurung, H. 2000. Nepal: Land use in mountain environment. *Environment and Agriculture.* Jha, P.K. et al. eds. Kathmandu: ECOS: 269–280.

[31] The more appropriate designation would be grassland.

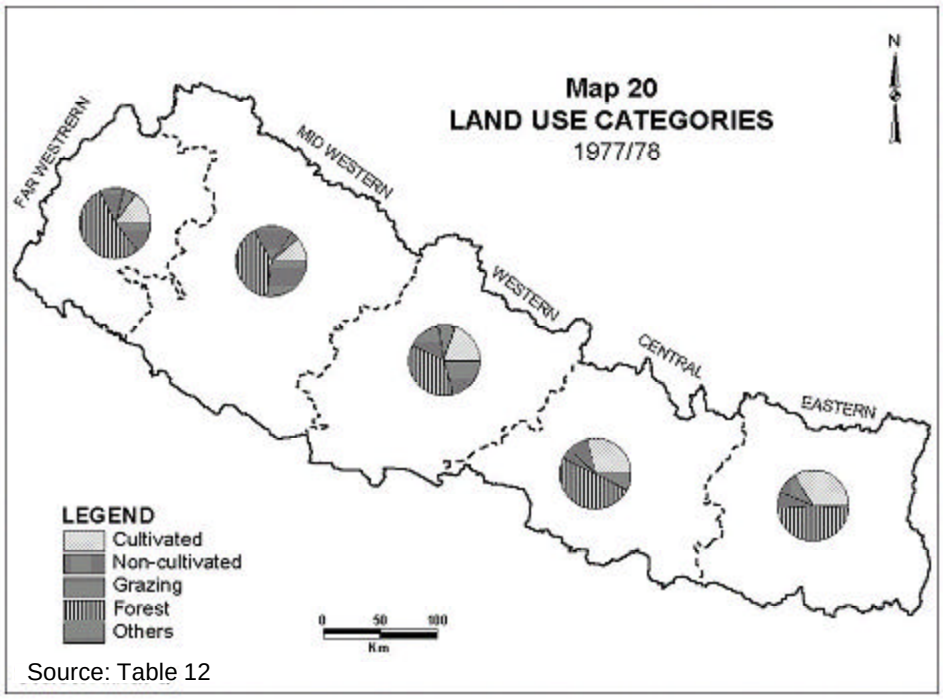


Table 12A: Land Use Categories by Physiographic Division, 1977/78
(%)

S.No.	Physiographic Division[a]	Agriculture, Cultivated	Agriculture, Non-Cultivated	Grazing	Forest	Others	Total
1	High Himalaya	0.3	0.2	50.5	3.5	81.8	22.7
2	High Mountain	8.3	14.9	29.1	28.8	9.0	20.1
3	Middle Mountain	41.2	67.5	16.7	34.9	2.2	30.1
4	Siwalik	8.7	5.6	1.2	23.4	2.7	12.8
5	Terai	41.6	11.9	2.7	9.4	4.3	14.3
	Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
	Row	**20.1**	**6.7**	**11.9**	**42.8**	**18.5**	**100.0**

[a]LRMP designation;
Source: Appendix Q

Table 12B: Land Use Categories by Development Region, 1977/78
(%)

S.No.	Development Region	Agriculture, Cultivated	Agriculture, Non-Cultivated	Grazing	Forest	Others
1	Far Western	9.7	11.3	12.2	16.6	10.1
2	Mid Western	15.3	17.9	44.6	27.4	41.7
3	Western	19.9	23.0	24.9	16.8	22.7
4	Central	26.6	23.8	8.1	21.1	8.7
5	Eastern	28.3	24.0	10.1	18.1	16.9
	Total	100.0	100.0	100.0	100.0	100.0
	Row %	**20.1**	**6.7**	**11.9**	**43.8**	**18.5**

Source: Appendix Q

The purpose of this recapitulation of forestry and LRMP data is to highlight the importance of land use planning for economic development. Such base-line data are the very tools of economic planning. The most significant finding of the LRMP mapping is that 986,658 hectares, or one-third of the total agricultural land, remains non-cultivated. This is also evidence of registered land exceeding cultivated holdings by a factor of 2.3:1 (Table 7). These data raise some relevant questions on the non-use of such agricultural land. Is it due to agricultural extension on marginal land or depopulation of such areas? These questions are important for a country that is said to be overpopulated (Table 9 and Fig. 17). Therefore, land use planning should constitute an essential part of national planning for optimum utilization of available land resources.

B. Transport Access

Another important aspect of spatial framework relates to transport infrastructure, which determines the future pattern of development. The north-south road linkages have now become more extended than when the concept of growth axes was first mooted, and these have been superseded by the East-West Highway with considerable change in the arterial route system. Yet, there is a lack of economic articulation based on such a vast infrastructural investment. In spatial planning terms, the East-West Highway should be developed as the spine of national development, with the north-south roads as a series of ribs for lateral diffusion.[32] Most north-south roads still end up as cul-de-sacs in the hill zone. Some of these should be extended further north, giving priority to those that can provide access to future sites of hydropower generation and to TAR. There would have been no controversy on the cost and environmental aspects of Arun-III if the 104 km access road had been in place as envisaged in the Fourth Plan (1970–1975). It is also necessary to provide road access from TAR to some remote areas for export of their products. The priority ones identified are Hyulsa-Simikot, Nyechung-Beni, Rasuwagarhi-Shyabrubensi, and Dhankuta-Kimathangka (Map 21). The reality of the East-West Highway as the pivotal axis will also entail reconsideration on other policy areas, such as industrialization and urbanization, which are discussed below in Sections C and D.

[32] Gurung H. 1989b. *Regional Patterns of Migration in Nepal*. Honolulu: East-West Centre.

A study on goods transit from India and China through Nepal has identified three possible routes: (i) Birganj-Tatopani, (ii) Biratnagar-Tatopani, and (iii) Bhairawa-Tatopani.[33] All three routes are assumed to pass through Kathmandu and exit at Tatopani. This scheme has overlooked the problem of Kathmandu as an emerging bottleneck and the advantage of other alternative routes, such as the Bardibas-Banepa and the Galchhi-Shyabrubensi roads. A more rational strategy recommended, in order to avoid the congestion of Kathmandu, is a direct passage from Bardibas-Banepa to Tatopani and Galchhi-Shyabrubensi to Rasuwagarhi.

A recent ADB agreement on north-south road connectivity refers to Birganj-Rasuwagarhi corridor through Kathmandu.[34] This proposed road connectivity should bypass Kathmandu as a Galchhi–Shyabrubensi alignment would provide a more direct link. Similarly, the above agreement has endorsed the feeder road, Basantpur-Khandbari via-Chainpur in eastern hill; however, it seems to ignore the advantage of a valley alignment against a ridge road. The most cost effective alignment would be from Pakhribas to Khandbari along the Arun valley.

One infrastructure asset that has remained under-utilized in Nepal is air transport.[35] The country has a high density of airports, an average of 3000 km^2 per airport (including Short Takeoff Landing). The 49 airports cover 37 districts, of which Solu-Khumbu (3), Chitwan (2) and Kailali (2) have more than one. Despite the presence of a dozen domestic airlines, the movement of passenger and cargo is very low due to the poor capacity of private carriers and preference for tourist-oriented routes. There is a need for better regulation of private airlines in the domestic sector.

C. Industrial Location

Industrial development in Nepal commenced from 'gateway towns' near railheads along the Indian border.[36] Subsequently, a number of industrial estates were established, but with a wrong interpretation of the concept. Originally, 'industrial estates' were devised to revive the economy of depressed areas (U.K.), and industrial de-concentration from large cities (India). In Nepal, the concept was implemented in reverse, that is, at the most advantaged locations (Kathmandu, Patan, Dharan, Hetauda, and Nepalgunj) and also for large-scale industries. There was no deliberate attempt of industrialization with an estate package for backward hill areas.

Presently, incentives for industrial location are provided on the basis of administrative districts grouped into five categories.[37] Income tax rebates vary from 10% for more developed areas to 60% for the least developed areas. In the case of excise duty, the rebates range from 10% for the former to 35% for the latter. The above levels are too marginal to influence the choice of industrial location, considering the immense administrative, infrastructural, marketing, and export advantages of Kathmandu and tarai towns. Moreover, categorization of incentives by administrative districts instead of specific locations is unscientific.

[33] Shrestha, A. 2003. A Study on Transit of India Goods to TAR Autonomous Region of China through Nepal. Report to Nepal Intermodal Transport Development Board. Kathmandu.

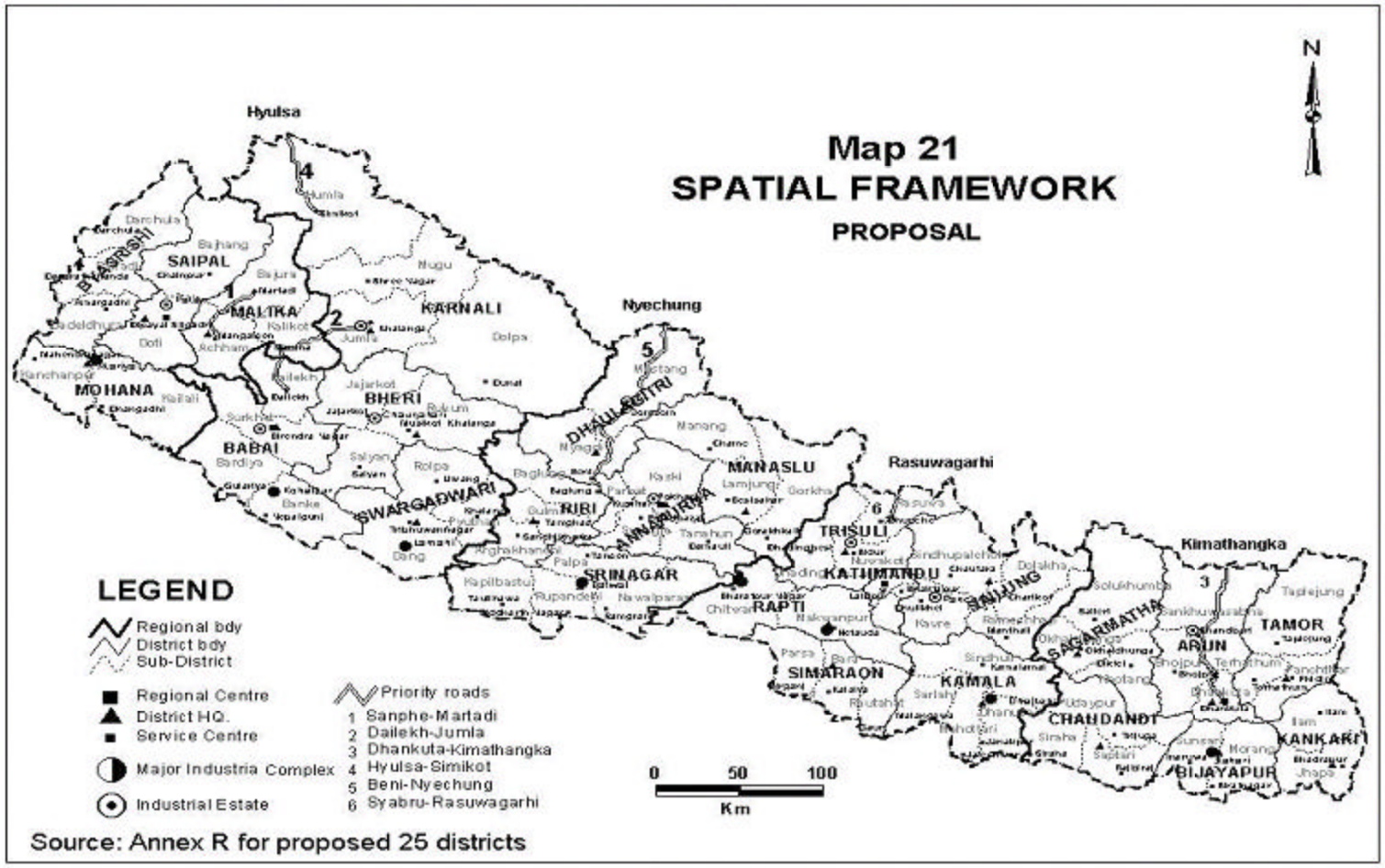
[34] ADB. 2004b. Aide Memoire on Road Network Development Project and Transport Connectivity Project. Manila.

[35] Okada, F. E. 1970. *Preliminary Report on Regional Development Areas in Nepal*. Kathmandu: NPC. The estimate of transport cost per ton per mile was NRs 11.10 by air, compared to NRs 15.00 by porter.

[36] Sharma, P. 1989. *Urbanization in Nepal*. Honolulu: East-West Centre.

[37] Nepal Gazette. 1992. *Industrial Enterprises Act 2049*. Kathmandu: His Majesty's Government of Nepal.

The scheme proposed for industrial location includes two components: industrial complex and industrial estate. The first type, Industrial Complex, to be located at road junctions along the East-West Highway, should be provided with full range of infrastructure facilities (energy, water, finance) and maximum fiscal incentives. Map 21 indicates eight such potential locations for large-scale industries to process goods both for domestic consumption and export. These are from west to east, Atariya, Kohalpur, Lamahi, Butwal, Bharatpur, Hetauda, Dhalkebar, and Itahari. The second type, Industrial Estate, an agglomeration of small and medium size industries, should be for hill and mountain areas, since movement of goods along the north-south roads has been mostly one way with very little export from these hinterlands. Such places could be Patan (Baitadi), Dipayal, Jumla, Jomsom, Batar, Panchkhal, and Khandbari for processing local products for export to the south or north according to the transport connection (Map 21). Among these, Batar and Panchkhal should be developed for deflection of industries from Kathmandu Valley. These industrial estates, due to their disadvantageous location, should be promoted with a higher level of incentives than industrial complexes of the first type.


Map 21
SPATIAL FRAMEWORK
PROPOSAL
N
Hyulsa
Nyechung
Rasuwagarhi
Kimathangka
SAIPAL
MALIKA
KARNALI
MOHANA
BHERI
BABAI
DHAULAGIRI
MANASLU
SWARGADWARI
RIRI
ANNAPURNA
TRISULI
SRINAGAR
KATHMANDU
RAPTI
SANJUNG
SAGARMATHA
TAMOR
ARUN
SIMARAON
KAMALA
CHAUDANDI
BIJAYAPUR
KANKAI
LEGEND
Regional bdy
District bdy
Sub-District
Regional Centre
District HQ.
Service Centre
Major Industria Complex
Industrial Estate
Priority roads
1 Sanphe-Martadi
2 Dailekh-Jumla
3 Dhankuta-Kimathangka
4 Hyulsa-Simikot
5 Beni-Nyechung
6 Syabru-Rasuwagarhi
0 50 100
Km
Source: Annex R for proposed 25 districts

D. Urban System

The last aspect of spatial framework is related to the urban system. Traditional towns of Nepal have been parasitic nodes, basically for the retailing of Indian commodities. The expansion of road networks in the hills without complementary economic activities has further reinforced this southward orientation. There is yet another problem regarding many settlements that have been designated as urban: the high increase in urban population reported in the censuses is due not to the change in their economic structure as such but to the dubious definition of urban areas. In Nepal, urban areas are designated primarily on the basis of population size (+10,000), and the number of such designated municipalities increased from 33 in 1991 to 58 in 2001. Most of these settlements are rural in character but have been upgraded to municipal status because their boundaries have been gerrymandered so as to qualify for a larger population size. This is evident from their functional character based on the economic activity of their resident population. Of the total urban population of 58 designated localities, one-third is still involved in primary occupation (Table 13A). In the case of hill municipalities, nearly half the population is involved in such occupation. Of the 20 hill municipalities, only three have one third of their population involved in non-primary occupation (Table 13B). In the tarai, 12 out of 25 municipalities fall in this category of higher level of urbanization. In Kathmandu Valley, three out five municipalities have less than one-third of population in non-primary occupation.

Table 13A: Occupation in Municipalities, 2001
Economically active population 10+ yrs.

(%)

	Hill	Kathmandu Valley	Inner Tarai	Tarai	Total
Primary (Agri. / Forestry / Mining)	49.0	14.7	42.1	34.5	32.2
Secondary (Manufacturing / Construction)	15.9	24.6	20.5	21.5	21.2
Trade (Retail / Hotel)	18.4	27.6	18.7	22.8	22.9
Services (Transport / Education / Health)	16.4	32.3	18.5	21.1	23.3
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Table 13B: Occupation in Municipalities, 2001
Proportion in Primary Occupation

(%)

Proportion	Hill	Kathmandu Valley	Inner Tarai	Tarai	Total
Over 50%	15	-	2	7	24
33-50%	2	2	4	6	14
Less than 33%	3	3	2	12	20
Total	**20**	**5**	**8**	**25**	**58**

Urbanization characterizes a dynamic region, which encompasses more than mere population size. First, the definition must be rationalized to encompass other significant criteria, such as non-primary occupation, density of population, and contiguity of built-up area.[38] Second, there should be a design of rank order for urban areas to articulate functional linkages in terms of their population size and range of activities. This will need more rigorous analysis of spatial economic structure than that is presently available from traffic and price data. The third is to integrate economic functions to the administrative centers, such as regional and district headquarters, most of which are no more than civil service colonies. A field survey in 1974/75 of Pokhara, the regional center of the Western Development Region, estimated the number of government employees to be about one-third, and possibly more, of all wage workers in the town.[39] In the late 1970s, Pokhara had 67 offices of regional, zonal, and district levels with an annual expenditure of NRs 10 million in salary and allowances.[40] Surkhet, renamed Birendranagar, was a mere hamlet until it was designated the regional center of the Far Western Development Region in 1972. It recorded a population of 13,859 in 1981. In 1986, it had 81 regional and district level offices, with 2,031 administrative personnel (Table 14). The suggestion for consolidation of districts is to have less of such administrative towns but create the few into poly-functional ones. They are devised into three hierarchies: the first hierarchy consists of five towns, including Kathmandu, which are to function as regional centers. The next hierarchy includes the district headquarters, which would number 20, excluding the five regional centers. Of these, 11 are new sites proposed for their advantageous location (Map 21). The headquarters of former districts (designated as Ilaqa or sub-district), divested of administrative status (63), should form the third hierarchy as service centers.

VI. DECENTRALIZATION EXERCISE

Decentralization has been an incessant theme in Nepal over the last five decades. Past initiatives, though, have all foundered on the bedrock of the highly centralized governance system of the country. Even now, the central government and the traditional bureaucracy do not seem amenable to some form of local autonomy. This chapter commences with a critical review of decentralization efforts in Nepal. It is followed by suggestions on district consolidation and resource mobilization to strengthen the process, and also observations on social inclusion as mandated in the study's terms of reference.

A. Critical Assessment

The Decentralization Act, 1982, and its Rules, 1984, entrusted districts the responsibility of preparing annual and periodic plans. In the past, such legal provisions had remained mere procedural formality. However, the Dhading District Development Project in 1983 came with budget support for local development programs, all of whose activities were co-coordinated through the District Panchayat aided by a technical office. The experience of the Dhading District Development Project

[38] Sharma, P. 1989. *Urbanization in Nepal*. Honolulu: East-West Centre. Appendix 2 cites the case of India, where urban localities are defined on the basis of minimum population of 5,000, occupation structure with over 75% in non-agriculture, and continuous built-up area.

[39] Blaikie, P., J. Cameron, and D. Seddon. 1977. *The Effects of Roads in West Central Nepal*. Norwich: Report to ODA.

[40] Gurung, Harka. 1978. Distribution pattern and cost of administration in Nepal. *Development and Administrative Studies*. 1(1): 1–18.

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was replicated in the districts of Gorkha and Lamjung. The project emphasis was on horizontal linkage through a facilitating of interrelationship between organizations and beneficiaries, as well as between elected, governmental, nongovernment organizations, and private sector entities.

Participatory planning received further impetus with United Nations Development Programme involvement in local governance through a series of projects. This commenced with a technical support component in 1985 that became the Strengthening Decentralization Planning Project in 1989.[41] Some new initiatives have been taken towards decentralization since the restoration of democracy in 1990. The Constitution of Nepal, 1990, enshrines the concept of popular participation through decentralization as one of its basic principles. Acts and Rules relating to district development committees (DDC), village development committees (VDC), and municipalities with increased authority and responsibility were promulgated in 1992. With the legitimization of local authorities by democratic parliament in 1992, the Strengthening Decentralization Planning Project was designated as Decentralization Support Project. The project objectives included: (i) assistance in implementation of decentralization policy, (ii) support to districts in planning and monitoring, and (iii) decentralized development management.

In 1995, the Decentralization Support Project was replaced by the Participatory District Development Project. This Project was aimed at enhancing the capacities of DDCs and VDCs as well as helping them establish linkages with local organizations, line agencies, nongovernment organizations and the private sector. Collection and analysis of data at the grassroots level, using GIS, and basic planning and monitoring techniques were made the routine activities of the DDCs. Handbooks on good governance and decentralization were prepared for the VDC level. It has since been expanded under the name of Local Governance Programme. These measures were followed by the promulgation of Local Self-Governance Act, 1999. It is too early to conjecture on the effectiveness of this Act, as its provisions are more in the nature of delegation of authority rather than devolution of power.

One of the constraints to effective decentralization has been the obduracy of the sectoral approach. The line agencies are an extension of sectoral ministries whose programming is basically incremental (some increase over the preceding year) and not according to the needs of districts. Their program targets are also based on disaggregation of sectoral budget ceiling without consideration to local requirements. Thus, decentralization remains ineffective as the local administration have no control over the line agencies, which have access to resources and technical expertise. Such a vertical command system is mainly responsible for the problem of lack of integration among sectoral agencies at the operational level. Since the formation of development regions in 1972, various ministries established their regional offices at the designated regional centers (Kathmandu, Dhankuta, Pokhara, and Surkhet). In Surkhet, for instance, there were 23 such offices with 484 personnel (Table 14). However, there was no adequate delegation of authority, thereby leading to these regional offices becoming a redundant hierarchy between the central and district levels.

[41] Lundberg, P. 1997. UNDP Support to Democratic Decentralization in Nepal. Islamabad.

Table 14: Offices and personnel, Surkhet, 1986

Category of Office	No. of Offices	Personnel		
		Gazetted	Non-gazetted	Total Personnel
1. Regional level	23	105	379	484
2. District level	20	34	779	813
3. Others (corps, bank, projects, etc.)	38	61	673	734
Total	**81**	**200**	**1,831**	**2,031**

Source: Regional Planning Office, Surkhet, Personal communication, dated 16 November 1987.

The regional offices were established after the dismantling of Directorate-General offices of the various sectoral ministries. However, some of the Directorate General offices have now been revived, thus, making the regional hierarchy superfluous. Programming of activities by the NPC continues to be sectoral according to the work division of members (agriculture/forestry, transport, social service, etc.). Thus, NPC's periodic reviews, carried out on a sectoral basis, make no consideration of the impact of development activities at the regional level. Similarly, budget allocation and data presentation of the Finance Ministry, in the *Budget Speech* and *Economic Survey*, are done entirely according to activity sectors and make no reference to the development regions. Again, development regions exist only in formality without any functional authority for coordination of activities. The recent appointment of Regional Administrators has been motivated mainly from security urgency rather than development concern.

There has been little breakthrough in decentralization despite numerous initiatives, and one observer refers to more than 13 high-level commissions and task forces in this endeavor.[42] The problem lies with the highly centralized government structure of Nepal that is loathe to delegate authority. In other words: The people who control power are evidently afraid of actually allowing people to share this power.[43] Thus, legislations with preambles of devolution and local governance have become instruments of delegation of responsibility not authority. A realistic approach towards decentralization needs first to clarify the confusion between delegation of central functions and devolution of authority to local entities. This implies a drastic change in concept on the relationship between the central government and the district hierarchy. Decentralization effort in Nepal has failed due to the command system and economic fragility of the districts. District autonomy is feasible only through consolidation of their economic base with a wider tax authority and revenue sharing of income from local resources.

B. District Consolidation

The districts cannot exercise autonomy without an adequate resource base. Therefore, the problem of decentralization has less to do with the legal framework or implementation strategy for local governance. It is basically related to the economic strength of the districts.

[42] Gurung, H. 1999. Area Planning in Nepal: Review of Experiences. Report commissioned by International Center for Integrated Mountain Development.

[43] Mikesell, S.L. 1999. *Class, State and Struggle in Nepal: Writings 1989–1995*. New Delhi: Manohar.

The Rana regime managed the then road-less country with 33 districts. In 1963, the number of districts was increased to 75 under a zonal hierarchy, with the objective of wider political mobilization for the Panchayat regime.[44] Such a proliferation of district units did not consider the economic factor and they have ever remained dependent on the central subsidy. Thus, fragile districts have become the bedrock against which decentralization efforts have floundered. It is futile to conceive of decentralization, least of all autonomy, when local bodies have to subsist on central dole.

The present administrative districts have no capacity for being agents of decentralization due to their poor economic base. According to their annual income and regular expenditure status, only 11 out of 75 districts are in surplus. These are Kathmandu, Lalitpur, Sindhu-Palchok, Chitwan, Banke, Kapilvastu, Rupandehi, Bara, Dhanusa, Morang, and Jhapa.[45] With the exception of Chitwan, with its income from national park revenue, the surplus of other districts is entirely due to customs revenue (Table 18). A reduction in number of districts seems a logical option to economize administrative expenses, since there is a limit to an increase in local revenue. At the same time, there has been much extension of roads, airports, and telecommunication facilities. These have narrowed geographic space in terms of travel time, enabling the administration of much larger areas. The proposal of district consolidation is to reduce the number of administrative districts to 25, one-third of the number that presently exists. The new districts are based on regrouping of two to four current districts that are geographically contiguous (Map 21 and Appendix S). The present 75 districts should be relegated to the status of *Ilaka*, or sub-district level, with their headquarters converted to service centers. Regulatory functions of the government should be located only in the headquarters of the enlarged districts. Such a consolidation will directly contribute to the reduction of wide divergence among districts in their size, population and revenue. The average area of a district will increase from 1,962 km^2 to 5,887 km^2, and their average population size from 209,529 to 928,585 persons. Average district revenue will be NRs 1,715 million, compared to NRs 572 million of 75 districts. Savings in annual regular expenditure will be NRs 23,016 million.

Such a rationalization of sub-national political units should also be extended to the lower hierarchy: VDCs. The number of VDCs has fluctuated from 3,912 since 1963, to 3,000 after the Second Amendment of the Constitution (1975), to 4,023 in 1982, and 3,908 presently. Of the total budget of NRs 630 million allocated in 1998/99 to the districts, 30.2% was for VDC secretaries. If the number of VDCs were to be reduced by half, there would be a regular budget saving of NRs 95 million annually.

C. Resource Mobilization

The basic problem of decentralization has to do with the fragile economic base of local bodies, be it at the district or village level. This has a direct implication on their extent of clout in the contest of power-sharing as well as capacity to finance the plans they formulate. The hard reality is that the income of most districts is abysmally low. A sample survey of 15 districts, representative

[44] Thapa, B. (Chairman). 1961. *Report of the Committee on Development District and Zonal Division*. Kathmandu: National Guidance Ministry.

[45] Gurung, H. 2002. Fragile districts: Futile decentralization. *Readings on Governance and Development.* pp. 1–27; published as monograph by SID/Nepal, 2003.

three elevation zones and five development regions, showed their average annual income to be NRs 2.9 million for a 5-year period (1992/93–1996/97).[46] Over a third of this income was from 'other' sources, about a quarter from land revenue, and a fifth from contract fees. The average five-year income of DDCs, by elevation zones, varied from NRs 0.57 million in mountain, NRs 1.93 million in hill, and NRs 6.21 million in tarai districts. The major part of even their administrative cost was provided through the central budget, even more so in the case of VDCs.

The proposal to reduce the number of districts will considerably enlarge their area of coverage. It will reduce their administrative cost by two-thirds, with a saving of over NRs 23,000 million in annual recurring expenditure. A larger area would also mean a wider revenue base. But the important agenda of district consolidation needs to be resource mobilization. This would require delegation of more functions to local bodies instead of expansion of central administration, which has stunted local initiative and capability. Consolidated districts with enhanced resource could be entrusted with some localized functions presently administered by the central government.

Remote mountain districts have the lowest revenue. Yet, they generate much resource which is diverted to the central exchequer. If the scheme of revenue sharing, as in the buffer zone of national parks, was to be adopted, districts with tourism activities would be much richer.[47] This can be exemplified by the by the case of two districts: in 1995, the Everest area generated tourism revenue of $869,120 through climbing royalty, trekking fee, and park entrance fee. This amounted to NRs 44.2 million, or 2.6 times more than the district's total revenue. If half of this was to be retained in Solu-Khumbu, the amount would be 7.6 times that of the central grant to the district. Similarly, upper Mustang yielded $737,100 from 1,053 trekkers in 1998. It amounted to NRs 51 million, or 12.2 times that of the district's total revenue. Of this income, 3.3% went to the Annapurna Conservation Area Project and the rest to the central exchequer. If this amount was to be shared, Mustang would have eight times more revenue than the central grant to the district.

There is even the case of poor mountain districts subsidizing the central government. Designated mountain districts have been receiving project grants under the Remote Area Development Programme since 1969. For the four years, 1998/99-2001/2002, this grant totaled NRs 310 million (Table 15). During the same period, royalty from climbing expeditions was NRs 460 million that went to the government. Each year, the government income from climbing royalty exceeded that of its grant to mountain districts. In other words, such mountain districts yielded over NRs 37 million annually to the central exchequer.

Districts can function as autonomous bodies only if they have an adequate resource base. This would mean curtailing the present highly centralized budgetary allocation system, instead empowering districts with more taxation authority. Another mechanism to enhance district revenue would be the allocation of a certain percent of revenue generated from the extraction of the district's natural resources. Accordingly, mountain/hill districts with hydroelectric projects and tarai districts with commercial timber would have considerable revenue even with a nominal percentage share.

[46] Institute of Sustainable Development (ISD). 1998. A Study on the Status of Human Priority Concerns at Sub-regional Level. Kathmandu.
[47] New ERA. 2004. Impact Assessment of Buffer Zone Programme in Nepal. Kathmandu: UNDP.

Table 15: Expedition Revenue and RADP[a] Budget
(NRs '000)

Fiscal Year	(A) Climbing royalty[b]	(B) RADP[c] budget	B as % of A
1998/99	84,989	68,944	81.2
1999/2000	119,839	57,595	48.1
2000/2001	127,394	90,442	71.0
2001/2002	128,185	93,912	73.3
Total	**460,407**	**310,893**	**65.5**
Increase, 1998/99 – 2001/2002	**50.8**	**36.2**	

[a] Remote Area Development Programme
Source: [b] Finance Ministry. 2002; table 9.16
[c] Finance Ministry budget allocation by fiscal year.

D. Social Inclusion[48]

The state ideology of Nepal, based on the caste system, has remained highly exclusionary. It has religious, linguistic and cultural dimensions. The first refers to the primacy of the Hindu religion, which sanctifies the caste system. State advocacy of a particular religion militates against equality in practicing other faiths. While the western concept of 'race' has a connotation of color, the Hindu version of untouchability also has a racial basis, as impure status is based on one's birth. This ideology perpetuates a high caste hegemony in politics, which further marginalizes low castes and ethnic groups in the economic sphere. Other major discriminations are related to culture and language, whereby ethnic and regional groups are marginalized. The State's alignment to Hindu religion, and the continued social exclusion of millions of people has economic and political ramifications. Since most of the marginalized remain poor, they have less access to education and are trapped in a vicious circle of poverty.

The hill high castes constitute 31.1% of Nepal's total population. Their literacy rate is above the national average (Table 16). They also constitute 62.2% of the highly educated and 66.2% of the governance elite. The proportion of their population living below the poverty line is 34–50%. At the other extreme are the *Dalit*, with very low literacy level, only a few in governance, and high poverty levels of 65–68%. The Newar of the capital region are the most advantaged, with high literacy and a large share in governance, and with only one-fourth of their households below the poverty line. The *Janajati* constitute 30.1% of the total population but only 8% among the governance elite. Their situation has been alleviated partly due to mercenary service and remittance. Table 18 also highlights the importance of education, in that the proportion of graduates and governance elite show close correspondence. However, that hill high castes, with less than one-third of the total population, constitute two-thirds of the governance elite is indicative of their entrenched monopoly in the power structure. In Nepal, where different regions are inhabited by varied sociocultural groups, it is necessary to reconcile economic and social aims within the framework of national development. However, the Hindu ideology of Nepal is discriminatory to two particular social groups in Nepal. These are the indigenous people (*Janajati*), on the basis of culture, and the

[48] Gurung, H. Forthcoming. Inclusive human development. Chapter III in *Nepal: Readings in Human Development.* Kathmandu: UNDP.

Table 16: Indicators of Social Disparity

Social Group (Native region)	Population 2001	Literacy rate 2001	Graduate and Above 2001	Governance elite, 1999	Proportion below poverty line,1996
1. Higher caste (Hill)	31.1	59.0-74.9	62.2	66.5	34-50
2. Higher caste (Tarai)	15.2	14.8-82.1	11.6	15.2	40[a]
3. Newar (Kathmandu Valley)	5.5	71.2	13.6	11.2	25
4. *Janajati*/ethnic (Hill and Tarai)	30.1	13.2-75.5	8.0	7.1	45-71
5. Dalit/low caste (Hill and Tarai)	12.8	9.4-46.9	0.7	0.3	65-68
6. Others (mostly Tarai)	5.3	34.7-93.9	2.9	-	38[b]
Total	**100.0**	**49.50**	**100.0**	**100.0**	**45**

[a]. Data available only for Yadav.
[b]. Data available only for Muslim.
Source: Gurung, forthcoming; tables 6, 9, 12 and 13.

Table 17: Distribution of *Janajati* and *Dalit* Population, 2001

	Geographic Region (No. of districts)	*Janajati* % of total	*Janajati* % of region	*Dalit* % of total	*Dalit* % of region
A. Mountain (15)		**5.3**	**-**	**4.8**	**-**
	1. West (8)	0.3	3.8	3.1	11.8
	2. Central (3)	0.7	78.8	0.1	4.4
	3. East (4)	4.3	58.2	1.6	7.2
B.	**Hill (36)**	**48.6**	**-**	**39.1**	**-**
	4. West (10)	3.5	14.6	12.9	17.4
	5. Central (13)	17.9	43.2	18.8	14.5
	6. Kathmandu Valley (3)	11.1	56.0	1.3	2.1
	7. East (10)	16.1	58.8	6.1	7.2
C.	**Inner Tarai (6)**	**12.4**	**-**	**8.6**	**-**
	8. West (2)	3.5	38.5	4.2	15.0
	9. Central (2)	5.9	56.3	2.1	6.4
	10. East (2)	4.0	57.9	2.3	11.0
D.	**Tarai (18)**	**32.8**	**-**	**47.4**	**-**
	11. West (4)	8.8	41.4	7.5	11.4
	12. Central (3)	6.2	29.3	7.7	11.7
	13. East (18)	17.8	21.8	32.2	12.7
NEPAL (75)		**100.0**	**35.7**	**100.0**	**11.6**

Source: Central Bureau Statistics, Census 2001.

low castes (*Dalit*), on the basis of untouchability. One may consider whether their problem of exclusion could be mitigated through decentralization. This would obviously depend on the spatial distribution pattern of these disadvantaged groups. The pattern refers not to their spread across regions and sub regions but their proportion within the political units (district or VDC). Such a spatial pattern, however, would have relevance only for the *Janajati* who constitute a significant proportion (+40%) of population in ten geographic regions and are in majority in five (Table 17). The *Dalit* as artisan dependents of the high castes happen to be in absolute minority in all regions and districts. They are in substantial proportion, 13–19%, only in the central and western hill sub regions. The pattern of their range of population by region and districts can be used as an indicator for focusing target programs. But intervention measures for social inclusion would have to address the basic issues of a State ideology that perpetuates sociocultural discrimination.

The agenda of social inclusion has political, sociocultural, and economic ramifications. The political aspect needs to consider a secular constitution, proportional representation, and more authority to local governments. Such autonomy should be more than delegation of authority and, instead, be for devolution. The sociocultural aspect should encompass religious and linguistic equality and a reservation system. In the economic sphere, the need is for affirmative action in education and employment for the disadvantaged groups. Affirmative action should be targeted at the most disadvantaged within the categorized social groups. There are two rationales as to why social inclusion through such measures deserves serious consideration: first, social exclusion is not the problem of the *Janajati* and the *Dalit* alone. Since these social groups constitute half of the total population, it is a national problem, as the country's intrinsic human resource is emasculated; second, targeting development towards these marginalized groups would directly contribute to poverty reduction, as most of them happen to be poor due to social discrimination.

VII. BEYOND THE BORDER

This chapter attempts to outline Nepal's development strategy in a wider regional context. However, one also needs to consider the complex nature of state relationship. As most international boundaries traverse a shared culture area, statements on the commonality in language and religion are mere rhetoric. The historical reality is that political conflicts are more like to occur amongst neighboring states, since competition for resources occurs between proximate countries. It is such a heritage of contest that constraints regional cooperation in most cases. Regional strategy has to consider not only the economic articulation among regions within the country but also the relative development level immediately across the border. Nepal is sandwiched between China and India and there is substantial difference in the nature of its boundary with these two giant neighbors. The northern one, with China (1,111 km), lies across high mountains and is regulated by a passport system. The Indo-Nepal border (1,808 km) to the west, south, and east is mostly along the plains and unrestricted for human movement, according to the Treaty of Peace and Friendship 1950. In geopolitical terms, the northern one is a 'boundary' while that along India is a 'frontier'. The contrast between these two types of borders is dramatized by Nepal's southern orientation economically, as evidenced by customs revenue.

Table 18: Customs Revenue, 2000/2001
(NRs '000)

S.N.	Location	
A.	**TAR Border**	**863,174**
1.	Yari (Humla)	45
2.	Mugu	36
3.	Nyechung (Mustang)	-
4.	Larke (Gorkha)	13
5	Rasuwagarhi	84
6.	Tatopani (Sindhupalchowk)	862,991
7.	Lamobagar (Dolakha)	-
8.	Kimathangka (Sankhuwa-sabha)	-
9.	Walung (Taplejung)	5
B.	**Indian Border**	**10,724,788**
10.	Jhulaghat (Baitadi)	862
11	Gaddachowki (Kanchanpur)	11,089
12.	Dhangadi (Kailali)	135,192
13.	Rajapur (Bardia)	2,222
14.	Nepalganj (Banke)	384,160
15.	Koilabas (Dang)	50
16.	Krishnagar (Kapilvastu)	382,122
17.	Sidarthanagar (Rupandehi)	1,463,657
18.	Birganj (Parsa)	6,334,487
19.	Gaur (Rautahat)	9,848
20.	Malangawa (Sarlahi)	9,415
21.	Jajeswar (Mohottari)	29,852
22.	Janakpur (Dhanusa)	31,410
23.	Siraha	4,848
24.	Rajbiraj	11,656
25.	Sahebgunj (Sunsari)	3,383
26.	Jogabani (Morang)	1,403,457
27.	Kakarbhita (Jhapa)	505,499
28.	Pashupatinagar (Ilam)	1,579
C.	**Kathmandu**	**695,543**
29.	Tribhuvan Airport	693,563
30.	Foreign Post Office	1,980
	Total	**12,283,525**

Source: Department of Customs. 2001. Nepal.

Of the total revenue of FY2000/2001, NRs 10,724 million, or 87.3%, was from the 19 customs points along the Indian border (Table 18). Most of customs revenue along the southern border was from points close to railheads. The nine customs points along the TAR border yielded NRs 863 million, or 7.0% of the total. Most of this revenue was from Tatopani on the Arniko Highway, with none from three customs points.

[49] These rates were Bihar 1.1%, U.P. 1.24%, as compared to Tamilnadu 5%, Maharastra 6.1% and Gujarat 7.6%; *Far Eastern Economic Review*, 14 September 2000.

A. India: North and East

The Indian states that adjoin Nepal are Uttarakhand in the west, Uttar Pradesh and Bihar to the south, and West Bengal and Sikkim in the east. Uttar Pradesh and Bihar have the lowest growth rate in per capita income among Indian states.[49] However, they are better placed than

Table 19: Indo-Nepal Trade, 1997/98-2000/2001
(NRs Million)

Fiscal Year	Export to India (F.o.b.)	% of total export	Import from India (c.i.f)	% of total import	Trade balance, India	% of total
1997/1998	8,794.4	32.0	27,331.0	30.7	-18,536.6	30.1
1998/1999	12,530.7	35.1	32,119.7	36.7	-19,589.0	37.8
1999/2000	21,220.7	42.6	39,660.1	36.6	-18,439.4	31.3
2000/2001	26,030.2	46.8	45,211.0	39.1	-19,180.8	32.0

Source: Central Bureau of Statistics. 2003a; p. 201, table 10.2.

the adjoining tarai of Nepal in terms of infrastructure, agricultural productivity, and industrial output, despite the inflow of migrants from there into Nepalese urban areas. The reverse flow of Nepalese labor into the hill states of Uttarakhand and Sikkim, and Darjeeling district is indicative of the poor economic status of Nepal. In fact, the Nepalese economy is too integrated with that of India, which is the source of labor and raw materials. Most urban areas outside Kathmandu developed as 'gateway towns' along the Indian border for export of timber, grain, hide, and herbs, and import of manufactured products. India is a major trading partner of Nepal, accounting for 36.0% of the total import and 40.7% of the total export (Table 19). Despite some improvement in exports to India after the 1996 Trade Treaty, following the Gujaral doctrine of reciprocity, Nepal had an annual trade deficit of NRs 19,180 million with India, which accounts for one-third of the total deficit. During the FY1997/98 and FY1998/1999, Nepal's export to India was 21 times than that to Tibet, and import from India 49 times that from TAR (Tables 19 and 20).

Nepalese plans continue to emphasize the development of the tarai as the most favorable area, as compared to the hill and mountain zones. But when related to the adjacent plains of India, with which it has to compete for market, its locational disadvantages becomes apparent. Since the soil fertility of the tarai is poorer than that of the Bihar and U.P. plains, owing to pedagogical differences inherent in foothill residual soils and alluvial silt of the plain, it is doubtful if tarai agricultural productivity can compete with that of north India.[50] Even in the industrial sector, the small scale of the economy would tend to limit the efficient growth of tarai industries. It does seem incongruent that a hill country like Nepal should emphasize on 'plains economy' only to compete with a similar but better endowed Gangetic plain. The strategy for the development of Nepal, vis-à-vis, India cannot be competitive as Nepal has too many disadvantages. Rather, it should be complementary, providing scope for specialization between the products of the highlands (Nepal) and the lowlands (India). The advantages of such a wider regional complementarity seem realistic if one notes that the Ganges plain contiguous to Nepal is one of the most densely populated areas of the world, and

[50] Gurung, H. 1971. Rationale for hill area development. *Nepal Industrial Digest*. 1971: 17–24.
[51] Kathmandu Post. 16 November 2004

that there are 14 cities larger than Kathmandu between Delhi and Calcutta. If Nepalese development could concentrate on the specialized processing of sub-tropical and temperate products, these would find a ready market in India.

The contest for advantage among neighboring countries is illustrated by the current talks between India and Nepal on transit routes. The former's request to provide transit routes to China through Nepal has been stalled by the latter with the excuse that alternate routes must be identified, the Arniko Highway having being classified as being too inadequate.[51] Similarly, Nepal's request to provide a cargo-train transit from Birganj Inland Customs Department to Rangpur-Singbad and Bangladesh was evaded by India, who laid the emphasis on the more effective utilization of the already agreed-upon Kakarbhita-Phulhari-Banglabadh transit route. Regional cooperation can be enhanced only if the neighboring countries are more accommodating. Nepal should allow Indo-Chinese trade along the Arniko Highway and then consider other alternative routes later on. Otherwise, such an entrepot advantage may be preempted by Indo-Chinese trade directly through Nathu La on which negotiations have started. On India's part, the casualness about increasing bilateral trade between Bangladesh and Nepal is tied-up with her monopolistic interest, and is against the spirit of South Asian Growth Quadrangle and the South Asia Sub Regional Economic Cooperation.[52]

B. China: Tibet Autonomous Region

Similar to the asymmetric economic relation between India and Nepal, trade between Nepal and TAR used to be dominated by Nepal. In the past, Newar traders monopolized business in Lhasa and trade flourished during the summer along the border. The decline in such transactions, as shown in Table 20, was the consequence of three factors. The first was the disruption in trade after the establishment of the communist regime, which discouraged the barter system, in TAR in 1959. The second was the displacement of Tibetan salt by iodized salt with the extension of roads and subsidies on its transport by air. The third was the decline in food grain surplus in the Nepali hills; this constituted the major trade commodity against Tibetan imports. The economic deprivation of Nepal's mountain areas has been compounded by the 'restricted area' policy since the 1960s. Such restrictions were the outcome of Nepal's willingness to cooperate with the Chinese in their policy of insulating TAR from adverse political influences. TAR was opened for tourism in 1979, but in Nepal, 44 village development committees of 13 mountain districts adjoining TAR still remained as restricted areas until 2003.

Nepal–TAR trade, at present, is mostly confined to the transit point at Tatopani on the Arniko Highway (Table 19). Nepal exports more than 70 commodities to TAR, of which wheat flour and vegetable ghee account for over 80% of the total value.[53] Similarly, TAR exports 71 commodities to Nepal, among which raw wool, live animals, and manufactured goods are important. Table 20 shows the volume of trade between Nepal and TAR in such major items (15 from Nepal, 22 from TAR). During the four fiscal years, 1995/96–1998/99, export value from Nepal increased by 68.9% and that from the TAR by 16.3%. But there was fluctuation in the annual trade balance with overall surplus of NRs 380.2 million in favor of TAR. In recent years, there has been significant increase in imports from TAR both in volume and value.

[52] ADB. 2004a. *Nepal: Country Strategy and Program (2005–2009)*. Manila.

[53] Federation of Nepalese Chambers of Commerce and Industry (FNCCI). 2000. *Nepal-China Trade, Economic and Cultural Cooperation*. Kathmandu.

TAR is presently undergoing much economic transformation and Nepal's regional strategy has to consider this new reality, which provides much scope for Nepal's northern border areas. As in Nepal, TAR had no roads until 1951. It has now 22,000 kilometers of road networks.

Table 20: Trade between Nepal and the Tibet Autonomous Region of China
(NRs Million)

Fiscal Year	Export to TAR	Export to Nepal	Trade Balance	In Favor of
1995/96	293.0	635.0	342.0	TAR
1996/97	545.8	383.5	162.3	Nepal
1997/98	544.2	486.0	58.2	Nepal
1998/99	480.1	738.8	258.7	TAR
Total	**1,863.1**	**2,243.3**	**380.2**	**TAR**
Increase %	68.5	16.3		
No. of items	15	22		

Source: Tatopani Customs Office, cited in Federation of Nepalese Chambers of Commerce and Industry. 2000; p. 25 and 28.

The volume of goods transported via highways increased 15.6 times in 1996, compared to 1965. During the five year period (1995-2000), TAR received 8.02 billion yuan, involving 716 projects, in economic assistance from the central government and other provinces.[54] The annual economic growth rate during the period was 10.7%. The allocation for the subsequent five years (2001-2004) is said to be 31.2 billion yuan ($3.76 billion). The average peasant's per capita income in TAR increased by 48.3% during 1991-2002.[55] The per capita income reached 1,040 yuan for rural, and 5,130 yuan for urban areas. It is to be noted that tourism activity was nonexistent in TAR prior to 1979. From 1980 to 1998, some 597,800 overseas tourists visited TAR, generating 178.9 million yuan. In 1988 alone, the region received 96, 444 overseas visitors; this generated a foreign exchange income of $33 million. TAR's annual GDP increase was 11.9% during 1991-1997.

TAR is no longer an economic backwater but a vibrant region. It would seem logical, then, to orient Nepal's remote areas towards the north, as the transport of goods from Kodari to Humla by road through TAR is cheaper than that from Nepalganj by air. Many mountain districts would take decades to have links to the south by road. These should, instead, be connected by road with the Tibetan prefectures of Ngari in the west and Xigaze in the east.

VIII. CONCLUSION AND RECOMMENDATIONS

A. Conclusion

The main purpose of incorporating a regional approach in national planning is to reduce spatial disparity in development. Such disparity may be inherent due to physical constraints, as

[54] Anonymous. 2000b. Information on Tibet Autonomous Region. Beijing: Mimeo, 16 pages.
[55] Zhong, Z. 2000. *China's Tibet.* Beijing: China Intercontinental Press.
[56] Gurung, H. 1971. Rationale for hill area development. *Nepal Industrial Digest*. 1971: 17–24.

well as be induced by bias towards advantaged areas. As the absorptive, or, rather, consumptive capacity of developed areas increase, lesser is the propensity for diverting resources to backward areas. The question is whether the 'poor areas' are indeed poor or whether it is reflective of indigence in planning. After all, planning should be directed not towards accentuating disparity but, rather, it should be a conscious effort towards minimizing regional differentials.[56] Development planning is no more a closed system of hard choice among regions and sectors There is much scope for mobilizing external resources and exploiting the opportunity of regional cooperation. With careful manipulation of total resources, domestic and foreign, it is possible to mitigate the glaring spatial disparity and also promote economic growth.

Regional approach was initiated in Nepal during the Fourth Plan (1970–75) with the creation of formal development regions. Since then, periodic plans have continued to allude to regional balance merely as an objective but without spatial integration of projects/ programs. While the regional concept was distorted to a dispersal of project activities, programming has continued to be highly sectoral. The consequence has been an accentuation of disparity among development regions and sub regions. The Central Region continues to dominate in development expenditure and concomitant benefits in all sectors, while the Mid Western and the Far Western remain neglected. Similarly, most mountain and hill sub regions languish in poverty, while Kathmandu Valley has been pampered beyond its absorptive capacity. Such a skewed pattern of development has influenced the trajectory of population shift, which is directed mostly towards the lowlands and the capital region.

A lack of regional approach is evident in some aspects that determine the spatial framework for development. The first aspect is the utter neglect of land use planning to resolve sectoral conflict in space allocation. The second aspect is the imbalance in road networks, with a vast tract of highlands still inaccessible. The country has a very high density of airports, but this alternative transport potential remains under-utilized. The third aspect is the lopsided pattern of industries due to inadequate legal framework to induce their location. The fourth aspect concerns the spurious definition of 'urban areas' without functional consideration and absence of designed hierarchy. In addition to these problems of internal spatial framework, the traditional southern orientation has ignored the potential of a northern link in the wider regional context.

There are two factors that constrain the application of regional perspective in Nepalese development exercise. One is the highly centralized governance system, and another the primacy of the sectoral approach. There has been little breakthrough in various efforts of decentralization due to the entrenched command system. Planning and budgeting continues to be influenced by sectoral activities, without consideration to their cumulative impact at the regional and sub regional levels. Such conventional approaches need to be changed with a regional perspective, as discussed in Chapters V, VI and VII. Some of these recommendations are recapitulated below.

B. Recommendations

The following 20-point recommendations on policy initiatives and implementation mechanism are related to eight aspects. These are: (i) spatial orientation, (ii) land use planning, (iii) transport access, (iv) industrial location, (v) urban system, (vi) decentralization, (vii) social inclusion, and (viii) organizational change.

Spatial Orientation: Conventional approach in Nepalese planning that favors advantaged areas has accentuated the disparity among regions and sub regions. There is need for reorientation for a more balanced development through:

1. Integration of highland and lowland economies based on product specialization; and

2. Extension of TAR connection for development of remote mountain areas.

Land Use Planning: Nepal has immense physical diversity but there is lack of planning to devise optimum use of varied land resources. Forest conservation in the tarai has a bleak prospect due to increasing access for alternative land use. On the other hand, erosion-prone highlands have become more amenable to environmental conservation, aided by low population pressure due to out-migration. Macro land use planning is essential to:

3. Devise rational allocation and use of land resources; and

4. Resolve the conflict among sectoral master plans (forestry, agriculture, irrigation).

Transport Access: The uneven pattern of road networks has stunted the development of most highland areas whose temperate products have much export value. The alternative mode of air transport also remains highly under-utilized. The priorities for transport access should be:

5. Extension of roads to link TAR,

6. Road access to potential hydro-project sites, and

7. Expansion of air service with better regulation of domestic airlines.

Industrial Location: The pattern of industrial location is highly skewed, with industries located primarily in southern border towns and Kathmandu Valley. Two categories of location are recommended for deliberate urbanization:

8. 'Industrial complex' at major road junctions along the East-West Highway for large-scale industries. The suggested locations are Atariya, Kohalpur, Lamahi, Butwal, Bharatpur, Dhalkebar and Itahari; and

9. 'Industrial district' for small and medium scale industries in appropriate locations in the highlands. The sites proposed are Dipayal, Surkhet, Jumla, Chaurajahari, Jomsom, Bidur, Panchkhal and Khandbari.

   Considering the environmental deterioration of Kathmandu Valley due to over-concentration of industries:

10. Large and medium size industries should be diverted outside the Valley by levying a high environmental surcharge.

Urban System: The increase in number of settlements designated as urban is unrealistic, being based merely on manipulation of their boundary for a larger population aggregation. Moreover, there is lack of a functional hierarchy among the designated urban localities. The recommendations to rationalize the urban system are:

11. Locations should be designated as urban on a functional basis e.g., where a majority of economically active population are engaged in nonfarm occupation, and

12. Establish a three-tier urban hierarchy of regional centers, district headquarters, and service centers.

Decentralization: There is proliferation in the number of administrative districts, village development committees and municipalities. They have very poor resource bases, and inadequate tax authority that make them unsustainable. The recommendations include:

13. Consolidation of administrative districts from the present 75 to 25, and drastic reduction in the number of VDCs and municipalities;

14. Devolution of functions to DDCs and VDCs with more tax authority; and

15. Local authorities to be given a share of revenue generated from extraction of resources within their area.

Social Inclusion: Nepal's state ideology based on caste hierarchy is the main source of social exclusion, which in turn influences economic and political inequality. Full social equality will be contingent on constitutional changes, such as a secular state, multilingual policy, and proportional representation. Within the scope of regional strategy, the relevant agenda for social inclusion are:

16. Affirmative action for indigenous people, Dalit and other disadvantaged groups in education and employment; and

17. Targeting programs for the socially excluded according to the area of their population concentration.

Organizational Change: The centralized structure of government functioning has constrained the regional approach in development planning. While the sectoral ministries have their defined jurisdiction, the composition of the NPC is also aligned according to sectoral groupings. Meanwhile, there is no entity to articulate the development needs of the
regions. The recommendations on the organizational aspect are:

18. Change the NPC's functional divisions from sectoral to regional assignment,

19. Strengthen regional offices of the ministries with delegation of adequate authority, and

20. Establish a Regional Development Council in each region for coordination of development activities. Additionally, an autonomous regional authority needs to be created for the most backward five districts of the Karnali Zone.

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Regional Disparity, 1971 and 2001

		FAR WEST		WEST		CENTRAL		EAST		NEPAL	
Select Indicator	**Unit**	**1971**	**2001**	**1971**	**2001**	**1971**	**2001**	**1971**	**2001**	**1971**	**2001**
1. Population density	km^2	44	84.1	83.9	155.5	141	293	98.3	187.8	78.5	157.3
2. Foodgrain Production[a]	1,000 t	678	1,507	703	1,474	1,204	2,154	902	2,062	3,486	7171
3. Irrigated area[b]	1,000 ha	29	15,309	25	1,866	62	3,839	63	6,268	1,802	7282
4. Road length[c]	km	233	2,829	478	2,236	646	5,169	373	2,989	1,731	13,223
5. Airports	Number	8	16	5	9	5	9	6	11	24	45
6. Industrial Establishment[d]	Number	25	309	45	583	453	1,496	136	825	659	3213
7. Hydropower generation[e]	kW	306	15,495	1,885	260,490	33,436	23,9922	6,991	1,794	42,618	52,7701
8. Schools[f]	Number	1,675	8,807	2,103	9,176	2,435	11,399	2,079	8,184	8,292	37,566
9. Hospital beds[g]	Number	125	1,332	326	1,604	1,275	4845	291	1115	2017	8,896

Sources: For 1971: Gurung, 1973; pp. 14-16
For 2001: [a] CBS. 2003a; Table 2.1
[b] CBS. 2003a; Table 14.2
[c] Dept. of Road; Map 2001
[d] CBS. 2003b; Table 13.2
[e] CBS. 2003a; Table 14.4
[f] CBS. 2003a; Table 8.1-8.3
[g] Dept. of Health Services

IRDP Coverage

S.N.	Duration	Project Name	Donors	Project Districts
1.	1974-90	Integrated Hill Dev. Project (IHDP)	SATA (Switzerland)	1. Dolakha,2. Sindhupalchok (east)
2.	1976-92	Rasuwa/Nuwakot	World Bank	1. Rasuwa, 2. Nuwakot
3.	1978-89	Sagarmatha	ADB, IFAD, EEC	1. Udayapur, 2. Satari 3. Siraha
4.	1979-89	Mahakali	World Bank, UNDP	1. Darchula, 2 Baitadi 3. Dadeldhura
5.	1979-92	Kosi Hills Area Rural Dev. Project (KHARDEP)	ODA (UK)	1. Sankhuwa-Sabha, 2. Bhojpur, 3. Dhankuta, 4. Terhathum
6.	1980-97	Rapti	USAID	1. Rukum, 2. Rolpa 3. Salyan, 4. Pyuthan5. Dang-Deukhuri
7.	1981-97	Karnali-Bheri	CIDA (Canada)	1. Jumla, 2. Dailekh 3. Surkhet
8.	1983-98	Dhading District Dev. Project	GTZ (Germany)	1. Dhading
9.	1986-95	Seti Zone	Asian Dev. Bank	1. Bajhang, 2. Bajura 3. Doti, 4. Achham,5. Kailali
10.	1987-	Mechi Hill Irrigation and Related Dev. Project	SNV (Netherlands)	1. Taplejung, 2. Panchthar, 3. Ilam
11.	1987-	Gulmi/Arghakhanchi	EEC	1. Gulmi, 2. Arghakhanchi
12.	1989-	Upper Sagarmatha	Asian Dev. Bank	1. Solukhumbu, 2. Okhaldhunga, 3. Khotang
13.	1991-	Gorkha District Dev. Project	GTZ	1. Gorkha
14.	1993-	Karnali Local Dev. Project	SNV (Netherland)	1. Kalikot, 2. Mugu, 3.Humla
15.	1994-	Lamjung District Dev. Project	GTZ	1. Lamjung
16.	1997-	Bhojpur/Sankhuwa-Sabha	GTZ	1. Bhojpur,2. Sankhuwa-Sabha
		Total	**12**	**41**

Source: Gurung, H. 1999; p.13.

Road Network, 2000

A	FAR WEST	Km	B	MID WEST	Km	C	WEST	Km	D	CENTRAL	Km	E	EAST	Km	Total
I	**Mountain**	**59**	**IV**	**Mountain**	**0**	**VII**	**Mountain**	**0**	**X**	**Mountain**	**468**	**XIII**	**Mountain**	**34**	**561**
1	Darchula	21	10	Humla	-	25	Mustang	-	41	Rasuwa	102	60	Solu-Khumbu	-	
2	Bajhang	38	11	Mugu	-	26	Manang	-	42	Sindhu-Palchok	216	61	Sankhuwa-Sava	2	
3	Bajura	-	12	Kalikot	-				43	Dolakha	150	62	Taplejung	32	
			13	Jumla	-										
			14	Dolpo	-										
II	Hill	524	V	Hill	720	VIII	Hill	1,409	XI	Hill	2,401	XIV	Hill	785	5,839
4	Baitadi	168	15	Dailekh	82	27	Argha Khanchi	132	C	With KV	2,401	63	Okhal-dhunga	17	
5	Dadheldhura	125	16	Jajarkot	-	28	Palpa	238	Ca	Without KV	1,141	64	Khotang	-	
6	Doti	159	17	Rukum	-	29	Gulmi	165	44	Makwanpur	326	65	Bhojpur	-	
7	Achham	72	18	Surkhet	300	30	Baglung	22	45	Dhading	157	66	Udayapur	175	
			19	Salyan	160	31	Myagdi	13	46	Nuwakot	220	67	Dhankuta	111	
			20	Rolpa	57	32	Parbat	38	47	Kabhre-Palanchok	352	68	Terhathum	32	
			21	Pyuthan	121	33	Kaski	309	48	Ramechhap	26	69	Panchthar	157	
						34	Syangja	138	49	Sindhuli	60	70	Ilam	293	
						35	Tanahu	231	Cb	Kathmandu Valley	1,260				
						36	Lamjung	54	50	Kathmandu	705				
						37	Gorkha	69	51	Lalitpur	383				
									52	Bhaktapur	172				
III	Tarai	549	VI	Tarai	977	IX	Tarai	827	XII	Tarai	2,300	XV	Tarai	2,170	6,823
8	Kanchanpur	205	22	Bardiya	214	38	Kapilvastu	326	53	Chitwan	569	71	Siraha	240	
9	Kailali	344	23	Banke	295	39	Rupandehi	260	54	Parsa	297	72	Saptari	293	
			24	Dang-Deukhuri	468	40	Nawalparasi	241	55	Bara	209	73	Sunsari	436	
									56	Rautahat	141	74	Morang	608	
									57	Sarlahi	374	75	Jhapa	593	
									58	Mahotari	346				
									59	Dhanusa	364				
	Total	**1,132**		**Total**	**1,697**		**Total**	**2,236**		**Total**	**5,169**		**Total**	**2,989**	**13,223**
													Nepal		**13,223**

Source: Dept. of Road map 2000

Hydropower Generation, 2001

A	FAR WEST	Kw	B	MID WEST	Kw	C	WEST	Kw	D	CENTRAL	Kw	E	EAST	Kw	Total
I	**Mountain**	**700**	**IV**	**Mountain**	**900**	**VII**	**Mountain**	**365**	**X**	**Mountain**	**53,600**	**XIII**	**Mountain**	**1,375**	**56,940**
1	Darchula	300	10	Humla	-	25	Mustang	240	41	Rasuwa	-	60	Solu-Khumbu	1,000	
2	Bajhang	200	11	Mugu	-	26	Manang	125	42	Sindhu-Palchok	53,600	61	Sankhuwa-Sava	250	
3	Bajura	200	12	Kalikot	500				43	Dolakha	-	62	Taplejung	125	
			13	Jumla	200										
			14	Dolpo	200										
II	**Hill**	**900**	**V**	**Hill**	**12,995**	**VIII**	**Hill**	**238,101**	**XI**	**Hill**	**194,082**	**XIV**	**Hill**	**7,219**	**45,3297**
4	Baitadi	200	15	Dailekh	-	27	Argha-Khanchi	-	C	With KV	194,082	63	Okhal-dhunga	125	
5	Dadheldhura	100	16	Jajarkot	-	28	Palpa	-	Ca	Without KV	192,682	64	Khotang	-	
6	Doti	200	17	Rukum	350	29	Gulmi	-	44	Makwanpur	92,000	65	Bhojpur	250	
7	Achham	400	18	Surkhet	345	30	Baglung	200	45	Dhading	32	66	Udayapur	-	
			19	Salyan	-	31	Myagdi	2000	46	Nuwakot	38,100	67	Dhankuta	240	
			20	Rolpa	-	32	Parbat	14,800	47	Kabhre-Palanchok	2,400	68	Terhathum	340	
			21	Pyuthan	12,300	33	Kaski	2,588	48	Ramechhap	60,150	69	Panchthar	-	
						34	Syangja	149,180	49	Sindhuli	-	70	Ilam	6,264	
						35	Tanahu	69,000	Cb	Kathmandu Valley	1,400				
						36	Lamjung	183	50	Kathmandu	1,400				
						37	Gorkha	150	51	Lalitpur	-				
									52	Bhaktapur	-				
III	**Tarai**	**0**	**VI**	**Tarai**	**0**	**IX**	**Tarai**	**1,024**	**XII**	**Tarai**	**15,000**	**XV**	**Tarai**	**3,200**	**19,224**
8	Kanchanpur	-	22	Bardiya	-	38	Kapilvastu	-	53	Chitwan	15,000	71	Siraha	-	
9	Kailali	-	23	Banke	-	39	Rupandehi	1,024	54	Parsa	-	72	Saptari	3,200	
			24	Dang-Deukhuri	-	40	Nawalparasi	-	55	Bara	-	73	Sunsari	-	
									56	Rautahat	-	74	Morang	-	
									57	Sarlahi	-	75	Jhapa	-	
									58	Mahotari	-				
									59	Dhanusa	-				
	Total	**1,600**		**Total**	**13,895**		**Total**	**239,490**		**Total**	**262,682**		**Total**	**11,794**	**52,9461**
													NEPAL		**52,9461**

Source: Nepal Electricity Authority

Literacy Rate, 2001

A	FAR WEST	Lite racy Rate	B	MID WEST	Literacy Rate	C	WEST	Literacy Rate	D	CENTRAL	Literacy Rate	E	EAST	Literacy Rate	Total
I	**Mountain**	**39.47**	**IV**	**Mountain**	**31.8**	**VII**	**Mountain**	**55.85**	**X**	**Mountain**	**41.6**	**XIII**	**Mountain**	**50.6**	**43.86**
1	Darchula	49.4	10	Humla	26.6	25	Mustang	51.8	41	Rasuwa	34	60	Solu-Khumbu	45.8	
2	Bajhang	35.3	11	Mugu	27.8	26	Manang	59.9	42	Sindhu-Palchok	40.2	61	Sankhuwa-Sava	53.8	
3	Bajura	33.7	12	Kalikot	37.5				43	Dolakha	50.6	62	Taplejung	52.2	
			13	Jumla	32.4										
			14	Dolpo	34.7										
II	**Hill**	**44.78**	**V**	**Hill**	**45.84**	**VIII**	**Hill**	**60.35**	**XI**	**Hill**	**8.77**	**XIV**	**Hill**	**56.4**	**53.22**
4	Baitadi	51.5	15	Dailekh	47.4	27	Argha Khanchi	55.9	C	With KV	58.77	63	Okhal dhunga	49.1	
5	Dadheldhura	51.6	16	Jajarkot	39.4	28	Palpa	66	Ca	Without KV	51.78	64	Khotang	49.8	
6	Doti	42.6	17	Rukum	39.7	29	Gulmi	57.5	44	Makwanpur	63.2	65	Bhojpur	54.5	
7	Achham	33.4	18	Surkhet	62.5	30	Baglung	61.4	45	Dhading	43.5	66	Udayapur	53.3	
			19	Salyan	48.1	31	Myagdi	55.7	46	Nuwakot	51.2	67	Dhankuta	64	
			20	Rolpa	37.2	32	Parbat	56.8	47	Kabhre-Palanchok	63.7	68	Terhathum	59	
			21	Pyuthan	46.6	33	Kaski	71.9	48	Ramechhap	39	69	Panchthar	55.3	
						34	Syangja	66.3	49	Sindhuli	50.1	70	Ilam	66.2	
						35	Tanahu	61.7	Cb	Kathmandu Valley	72.73				
						36	Lamjung	56.6	50	Kathmandu	77.1				
						37	Gorkha	53.9	51	Lalitpur	70.8				
									52	Bhaktapur	70.3				
III	**Tarai**	**55.9**	**VI**	**Tarai**	**53.5**	**IX**	**Tarai**	**53.5**	**XII**	**Tarai**	**43.86**	**XV**	**Tarai**	**54.72**	**52.30**
	Kanchanpur	59.7	22	Bardiya	45.4	38	Kapilvastu	41.5	53	Chitwan	70.8	71	Siraha	40.3	
9	Kailali	52.1	23	Banke	57.4	39	Rupandehi	66	54	Parsa	42.4	72	Saptari	49.3	
			24	DangDeukhuri	57.7	40	Nawalparasi	53	55	Bara	42.4	73	Sunsari	60.4	
									56	Rautahat	32.4	74	Morang	56.7	
									57	Sarlahi	36.2	75	Jhapa	66.9	
									58	Mahotari	34.4				
									59	Dhanusa	48.4				
	Total	**46.71**		**Total**	**43.71**		**Total**	**56.56**		**Total**	**48.10**		**Total**	**53.91**	**49.79**
													NEPAL		**53.7**

Source: CBS. 2002.

Population Per Health Institution, 2001/2002

A	FAR WEST	Pop/Ins.	B	MID WEST	Pop/Ins.	C	WEST	Pop/Ins.	D	CENTRAL	Pop/Ins.	A	EAST	Pop/Ins.	Total
I	**Mountain**	**3,343**	**IV**	**Mountain**	**2,273**	**VII**	**Mountain**	**767.75**	**X**	**Mountain**	**3,626.26**	**XIII**	**Mountain**	**137.40**	**2,971.58**
1	Darchula	2,905	10	Humla	1,561	25	Mustang	832	41	Rasuwa	2,354	60	Solu-Khumbu	3077	
2	Bajhang	3,409	11	Mugu	1,690	26	Manang	685	42	Sindhu-Palchok	3,872	61	Sankhuwa-Sava	4082	
3	Bajura	3,885	12	Kalikot	3,519				43	Dolakha	3 ,713	62	Taplejung	2494	
			13	Jumla	2,981										
			14	Dolpo	1,231										
II	**Hill**	**3,583**	**V**	**Hill**	**4,269.63**	**VIII**	**Hill**	**4,330.51**	**XI**	**Hill**	**6,892.48**	**XIV**	**Hill**	**4,027.56**	**4,801.46**
4	Baitadi	3,397	15	Dailekh	3,692	27	Argha	4,846	C	With KV	6,892.48	63	Okhal dhunga	2,798	
5	Dadheldhura	4,852	16	Jajarkot	3,746	28	Palpa	4,069	Ca	Without KV	5,114.94	64	Khotang	3,005	
6	Doti	3,907	17	Rukum	4,096	29	Gulmi	3,662	44	Makwanpur	8,353	65	Bhojpur	3,172	
7	Achham	3,084	18	Surkhet	5,444	30	Baglung	4,137	45	Dhading	6,513	66	Udayapur	5,994	
			19	Salyan	4,448	31	Myagdi	2,861	46	Nuwakot	4,306	67	Dhankuta	4,381	
			20	Rolpa	4,039	32	Parbat	2,870	47	Kabhre-Palanchok	4,060	68	Terhathum	3,428	
			21	Pyuthan	4,336	33	Kaski	7,766	48	Ramechhap	3,862	69	Panchthar	4,811	
						34	Syangja	4,666	49	Sindhuli	5,088	70	Ilam	5,656	
						35	Tanahu	6,707	Cb	Kathmandu Valley	11,504.13				
						36	Lamjung	2,904	50	Kathmandu	14,620				
						37	Gorkha	4,116	51	Lalitpur	7,506				
									52	Bhaktapur	9,394				
III	**Tarai**	**14,414**	**VI**	**Tarai**	**9,926.36**	**IX**	**Tarai**	**7,622.89**	**XII**	**Tarai**	**6,459.90**	**XV**	**Tarai**	**8,087.36**	**7,786.43**
8	Kanchanpur	16,430	22	Bardiya	10,932.83	38	Kapil-vastu	6,179.18	53	Chitwan	10,977.86	71	Siraha	5,021	
9	Kailali	13,406	23	Banke	8,038.33	39	Rupan-dehi	9,839.15	54	Parsa	5,781.62	72	Saptari	4,833	
			24	Dang-Deukhuri	11,277.56	40	Nawal-parasi	7,035.875	55	Bara	5,591.35	73	Sunsari	11,375	
									56	Rautahat	5,506.38	74	Morang	12,221	
									57	Sarlahi	6,294.70	75	Jhapa	13,233	
									58	Mahotari	7,282.65				
									59	Dhanusa	6,455.42				
	Total	**5,331.70**		**Total**	**4,980.124**		**Total**	**5,039.706**		**Total**	**6,294.38**		**Total**	**5,661.52**	**5,588.08**
													NEPAL		**5,588**

Department of Health Services Annual Report, 2001/2002; p.344.

Housholds with Piped Water, 2001

A	FAR WEST	%	B	MID WEST	%	C	WEST	%	D	CENTRAL	%	E	EAST	%	Total
I	**Mountain**	**59.76**	**IV**	**Mountain**	**54.98**	**VII**	**Mountain**	**88.85**	**X**	**Mountain**	**82.83**	**XIII**	**Mountain**	**76.4**	**72.56**
1	Darchula	71.2	10	Humla	64.2	25	Mustang	84.3	41	Rasuwa	84.8	60	Solu-Khumbu	76.5	
2	Bajhang	43.5	11	Mugu	55.1	26	Manang	93.4	42	Sindhu-Palchok	81.4	61	Sankhuwa-Sava	62.4	
3	Bajura	64.6	12	Kalikot	45.5				43	Dolakha	82.3	62	Taplejung	90.3	
			13	Jumla	73.9										
			14	Dolpo	36.2										
II	**Hill**	**54.38**	**V**	**Hill**	**59.09**	**VIII**	**Hill**	**79.236**	**XI**	**Hill**	**74.49**	**XIV**	**Hill**	**64.58**	**66.35**
4	Baitadi	59.4	15	Dailekh	36.6	27	Argha Khanchi	66.4	C	With KV	74.49	63	Okhal dhunga	70.1	
5	Dadheldhura	64.8	16	Jajarkot	48.9	28	Palpa	84.7	Ca	Without KV	74.783	64	Khotang	64.2	
6	Doti	49.4	17	Rukum	63.1	29	Gulmi	79.3	44	Makwanpur	77.1	65	Bhojpur	57.3	
7	Achham	43.9	18	Surkhet	69.1	30	Baglung	88	45	Dhading	79.2	66	Udayapur	26.9	
			19	Salyan	65.4	31	Myagdi	83.8	46	Nuwakot	85	67	Dhankuta	80.7	
			20	Rolpa	62	32	Parbat	84	47	Kabhre-Palanchok	80	68	Terhathum	72.7	
			21	Pyuthan	68.5	33	Kaski	86.9	48	Ramechhap	72	69	Panchthar	69.1	
						34	Syangja	81.4	49	Sindhuli	55.4	70	Ilam	75.6	
						35	Tanahu	68.9	Cb	Kathmandu Valley	221.7				
						36	Lamjung	84.3	50	Kathmandu	84.1				
						37	Gorkha	63.9	51	Lalitpur	63				
									52	Bhaktapur	74.6				
III	**Tarai**	**33.15**	**VI**	**Tarai**	**39.43**	**IX**	**Tarai**	**46.87**	**XII**	**Tarai**	**32.23**	**XV**	**Tarai**	**16.4**	**33.62**
8	Kanchanpur	23.4	22	Bardiya	23.8	38	Kapil-vastu	42.5	53	Chitwan	30.6	71	Siraha	15.9	
9	Kailali	42.9	23	Banke	41	39	Rupan-dehi	62.8	54	Parsa	42.4	72	Saptari	7.2	
			24	Dang-Deukhuri	53.5	40	Nawal parasi	35.3	55	Bara	24.6	73	Sunsari	19.9	
									56	Rautahat	34.7	74	Morang	13.8	
									57	Sarlahi	28.8	75	Jhapa	25.2	
									58	Mahotari	34.5				
									59	Dhanusa	30				
	Total	**49.10**		**Total**	**51.17**		**Total**	**71.65**		**Total**	**63.18**		**Total**	**52.46**	**57.51**
													NEPAL		**57.5**

Source: CBS. 2002.

Human Development Index, 2001

A	FAR WEST	HDI	B	MID WEST	HDI	C	WEST	HDI	D	CENTRAL	HDI	E	EAST	HDI	Total
I	**Mountain**	**0.355**	**IV**	**Mountain**	**0.347**	**VII**	**Mountain**	**0.488**	**X**	**Mountain**	**0.423**	**XIII**	**Mountain**	**0.474**	**0.386**
1	Darchula	0.424	10	Humla	0.367	25	Mustang	0.482	41	Rasuwa	0.394	60	Solu-Khumbu	0.479	
2	Bajhang	0.331	11	Mugu	0.304	26	Manang	0.502	42	Sindhu-Palchok	0.414	61	Sankhuwa-Sava	0.481	
3	Bajura	0.31	12	Kalikot	0.322				43	Dolakha	0.45	62	Taplejung	0.467	
			13	Jumla	0.348										
			14	Dolpo	0.371										
II	**Hill**	**0.403**	**V**	**Hill**	**0.417**	**VIII**	**Hill**	**0.489**	**XI**	**Hill**	**0.547**	**XIV**	**Hill**	**0.5**	**0.512**
4	Baitadi	0.391	15	Dailekh	0.381	27	Argha Khanchi	0.471	C	With KV	0.547	63	Okhaldhunga	0.481	
5	Dadheldhura	0.434	16	Jajarkot	0.343	28	Palpa	0.486	Ca	Without KV	0.466	64	Khotang	0.442	
6	Doti	0.402	17	Rukum	0.386	29	Gulmi	0.467	44	Makwanpur	0.479	65	Bhojpur	0.472	
7	Achham	0.35	18	Surkhet	0.486	30	Baglung	0.492	45	Dhading	0.41	66	Udayapur	0.488	
			19	Salyan	0.399	31	Myagdi	0.498	46	Nuwakot	0.463	67	Dhankuta	0.507	
			20	Rolpa	0.384	32	Parbat	0.504	47	Kabhre-Palanchok	0.543	68	Terhathum	0.523	
			21	Pyuthan	0.416	33	Kaski	0.593	48	Ramechhap	0.434	69	Panchthar	0.484	
						34	Syangja	0.535	49	Sindhuli	0.469	70	Ilam	0.521	
						35	Tanahu	0.524	Cb	Kathmandu Valley	0.612				
						36	Lamjung	0.492	50	Kathmandu	0.652				
						37	Gorkha	0.454	51	Lalitpur	0.588				
									52	Bhaktapur	0.595				
III	**Tarai**	**0.45**	**VI**	**Tarai**	**0.44**	**IX**	**Tarai**	**0.494**	**XII**	**Tarai**	**0.451**	**XV**	**Tarai**	**0.491**	**0.478**
8	Kanchanpur	0.463	22	Bardiya	0.429	38	Kapilvastu	0.437	53	Chitwan	0.518	71	Siraha	0.427	
9	Kailali	0.442	23	Banke	0.479	39	Rupandehi	0.546	54	Parsa	0.448	72	Saptari	0.453	
			24	Dang-Deukhuri	0.409	40	Nawalparasi	0.482	55	Bara	0.465	73	Sunsari	0.5	
									56	Rautahat	0.409	74	Morang	0.531	
									57	Sarlahi	0.408	75	Jhapa	0.494	
									58	Mahotari	0.407				
									59	Dhanusa	0.449				
	Total	**0.404**		**Total**	**0.402**		**Total**	**0.491**		**Total**	**0.49**		**Total**	**0.493**	**0.471**
													NEPAL		**0.471**

Source: UNDP. 2004; Appendix 2.1, Table 1, pp.141–143.

Registered Land

A	FAR WEST	ha	B	MID WEST	ha	C	WEST	ha	D	CENTRAL	ha	E	EAST	ha	Total
I	**Mountain**	**28,8475**	**IV**	**Mountain**	**150,010**	**VII**	**Mountain**	**26,405**	**X**	**Mountain**	**273,159**	**XIII**	**Mountain**	**357,704**	**1,095,753**
1	Darchula	80,947	10	Humla	12,129	25	Mustang	11,092	41	Rasuwa	30,437	60	Solu-Khumbu	127,196	
2	Bajhang	131,931	11	Mugu	9,525	26	Manang	153,13	42	Sindhu-Palchok	138,496	61	Sankhuwa-Sava	129,560	
3	Bajura	75,597	12	Kalikot	70,971				43	Dolakha	104,226	62	Taplejung	100,948	
			13	Jumla	47,745										
			14	Dolpo	9,640										
II	**Hill**	**37,4094**	**V**	**Hill**	**774,736**	**VIII**	**Hill**	**981,169**	**XI**	**Hill**	**497,442**	**XIV**	**Hill**	**771,734**	**3,399,175**
4	Baitadi	11,2821	15	Dailekh	125,650	27	Argha Khanchi	97,310	C	With KV	497,442	63	Okhal-dhunga	105,945	
5	Dadheldhura	15,697	16	Jajarkot	129,853	28	Palpa	128,740	Ca	Without KV	425,508	64	Khotang	157,187	
6	Doti	108,753	17	Rukum	133,652	29	Gulmi	105,318	44	Makwanpur	58,812	65	Bhojpur	137,310	
7	Achham	136,823	18	Surkhet	51,268	30	Baglung	105,828	45	Dhading	76,657	66	Udayapur	69,968	
			19	Salyan	134,199	31	Myagdi	30,632	46	Nuwakot	69,445	67	Dhankuta	85,236	
			20	Rolpa	74,802	32	Parbat	45,456	47	Kabhre-Palanchok	126,034	68	Terhathum	59,145	
			21	Pyuthan	125,312	33	Kaski	80,600	48	Ramechhap	67,637	69	Panchthar	50,536	
						34	Syangja	94,876	49	Sindhuli	26,923	70	Ilam	106,407	
						35	Tanahu	81,657	Cb	Kathmandu Valley	71,934				
						36	Lamjung	79,925	50	Kathmandu	33,544				
						37	Gorkha	130,827	51	Lalitpur	27,376				
									52	Bhaktapur	11,014				
III	**Tarai**	**109,364**	**VI**	**Tarai**	**185,956**	**IX**	**Tarai**	**259,468**	**XII**	**Tarai**	**51,2651**	**XV**	**Tarai**	**51,3886**	**581,325**
8	Kanchanpur	35,383	22	Bardiya	53,274	38	Kapilvastu	91,652	53	Chitwan	52,574	71	Siraha	95,715	
9	Kailali	7,3981	23	Banke	50,758	39	Rupandehi	98,206	54	Parsa	52,176	72	Saptari	108,551	
			24	Dang-Deukhuri	81,924	40	Nawal-parasi	69,610	55	Bara	69,290	73	Sunsari	81,269	
									56	Rautahat	89,528	74	Morang	109,238	
									57	Sarlahi	88,722	75	Jhapa	119,113	
									58	Mahotari	80,549				
									59	Dhanusa	79,812				
	Total	**771,933**		**Total**	**1,110,702**		**Total**	**1,267,042**		**Total**	**1,283,252**		**Total**	**1,643,324**	**6,076,253**
													NEPAL		**7,311,973**

Source: Dept. of Land Management.

Estimated Foodgrain Production, 2000/2001

S.N.	Food Crop	FAR WEST	MID WEST	WEST	CENTRAL	(KV)	EAST	Total	%
1	Paddy	350,050	414,080	798,939	1,285,108	-92,579	1,393,288	4,216,465	52.8
2	Maize	71,786	260,957	347,625	418,132	-38,104	385,612	1,484,112	20.7
3	Wheat	154,840	203,021	217,989	375,019	-31,820	207,296	1,157,865	16.1
4	Millet	10,551	23,331	103,096	71,365	-2,890	74,509	282,852	3.9
5	Barley	5,641	12,568	6,234	3,964	-333	2,081	30,488	0.4
	Total	592,868	913,957	1,473,883	2,153,588	-165,726	2,062,786	7,171,782	100
	Row%	8.3	12.7	20.5	30	-2.3	27.8	100	
	Population 2001	2,191,330	3,012,975	4,571,013	8,031,629	-1,645,091	5,344,476	23,151,423	
	Row%	9.5	13	19.7	34.7	-7.1	23.1	100	
	Food grain availability Person/kg.	27	30	32	27	-10	39	30	

Source: CBS. 2003a; Table 2.1, pp.48–72.

Industries by Gross Fixed Assets, 2001/2002

A	FAR WEST	NRs '000	B	MID WEST	NRs '000	C	WEST	NRs '000	D	CENTRAL	NRs '000	E	EAST	NRs '000	Grand Total
I	**Mountain**	**269**	**IV**	**Mountain**	**0**	**VII**	**Mountain**	**0**	**X**	**Mountain**	**255,037**	**XIII**	**Mountain**	**867**	**256,173**
1	Darchula		10	Humla		25	Mustang	-	41	Rasuwa	240,955	60	Solu-Khumbu	861	
2	Bajhang	-	11	Mugu	-	26	Manang	0	42	Sindhu-Palchok	5,647	61	Sankhuwa-Sava	-	
3	Bajura	269	12	Kalikot	-				43	Dolakha	8,435	62	Taplejung	6	
			13	Jumla	-										
			14	Dolpo	-										
II	**Hill**	**0**	**V**	**Hill**	**11,549**	**VIII**	**Hill**	**634,939**	**XI**	**Hill**	**10,247,721**	**XIV**	**Hill**	**1,711,407**	**12,605,616**
4	Baitadi		15	Dailekh	112	27	Argha	3,034	C	With KV	10,247,721	63	Okhaldhunga		
5	Dadheldhura	-	16	Jajarkot	-	28	Palpa	28,893	Ca	Without-KV	2,252,175	64	Khotang	937	
6	Doti	-	17	Rukum	-	29	Gulmi	-	44	Makwanpur	1,926,935	65	Bhojpur	-	
7	Achham	-	18	Surkhet	11,437	30	Baglung	-	45	Dhading	22,992	66	Udayapu	1,604,934	
			19	Salyan	-	31	Myagdi	-	46	Nuwakot	5,025	67	Dhankuta	44,579	
			20	Rolpa		32	Parbat	-	47	Kabhre-Palanchok	297,223	68	Terhathum	2,788	
			21	Pyuthan	-	33	Kaski	385,032	48	Ramechhap	-	69	Panchthar	15,427	
						34	Syangja	5,934	49	Sindhuli	-	70	Ilam	42,742	
						35	Tanahu	26,910	Cb	Kathmandu Valley	7,995,546				
						36	Lamjung	1,069	50	Kathmandu	6,057,634				
						37	Gorkha	184,067	51	Lalitpur	1,455,765				
									52	Bhaktapur	482,147				
III	Tarai	992,639	VI	Tarai	36,359	IX	Tarai	5,089,701	XII	Tarai	10,499,440	XV	Tarai	10,439,992	27,058,131
8	Kanchan	129,105	22	Bardiya	-	38	Kapil	600,996	53	Chitwan	1,169,322	71	Siraha	116,036	
9	Kailali	863,534	23	Banke	-	39	Rupandehi	1,587,496	54	Parsa	2,463,575	72	Saptari	78,363	
			24	Dang-Deukhuri	36,359	40	Nawalparasi	2,901,209	55	Bara	4,223,384	73	Sunsari	4,706,372	
									56	Rautahat	881,282	74	Morang	4,540,818	
									57	Sarlahi	707,479	75	Jhapa	998,403	
									58	Mahotari	652,380				
									59	Dhanusa	402,018				
	Total	**992,908**		**Total**	**47,908**		**Total**	**5,724,640**		**Total**	**21,002,198**		**Total**	**12,152,266**	**39,919,920**
													NEPAL		**39,919,920**

Source: CBS. 2003b; Table 1A, pp.1–31.

Per Capita Income (PPP), 2001

A	FAR WEST	$	B	MID WEST	$	C	WEST	$	D	CENTRAL	$	E	EAST	$	Total
I	**Mountain**	**939**	**IV**	**Mountain**	**940**	**VII**	**Mountain**	**2,505**	**X**	**Mountain**	**1,157**	**XIII**	**Mountain**	**1,276**	**1,114**
1	Darchula	1,175	10	Humla	1,014	25	Mustang	2,466	41	Rasuwa	1,802	60	Solu-Khumbu	1,455	
2	Bajhang	825	11	Mugu	1,105	26	Manang	2,746	42	Sindhu-Palchok	1,194	61	Sankhuwa-Sava	1,257	
3	Bajura	907	12	Kalikot	775				43	Dolakha	965	62	Taplejung	1,169	
			13	Jumla	1,104										
			14	Dolpo	1,279										
II	**Hill**	**945**	**V**	**Hill**	**879**	**VIII**	**Hill**	**1,198**	**XI**	**Hill**	**2,083**	**XIV**	**Hill**	**1,057**	**1,424**
4	Baitadi	890	15	Dailekh	679	27	Argha Khanchi	1,130	C	With KV	2,083	63	Okhaldhunga	952	
5	Dadheldhura	1,321	16	Jajarkot	839	28	Palpa	1,167	Ca	Without KV	1,115	64	Khotang	954	
6	Doti	945	17	Rukum	1,002	29	Gulmi	760	44	Makwanpur	1,836	65	Bhojpur	1,002	
7	Achham	770	18	Surkhet	1,088	30	Baglung	1,145	45	Dhading	1,075	66	Udayapur	975	
			19	Salyan	791	31	Myagdi	1,209	46	Nuwakot	1,237	67	Dhankuta	1,102	
			20	Rolpa	877	32	Parbat	1,220	47	Kabhre-Palanchok	1,572	68	Terhathum	1,246	
			21	Pyuthan	754	33	Kaski	1,707	48	Ramechhap	1,009	69	Panchthar	1,072	
						34	Syangja	1,333	49	Sindhuli	1,079	70	Ilam	1,215	
						35	Tanahu	1,188	Cb	Kathmandu Valley	2,458				
						36	Lamjung	1,284	50	Kathmandu	3,438				
						37	Gorkha	1,219	51	Lalitpur	2,059				
									52	Bhaktapur	1,862				
III	**Tarai**	**1,244**	**VI**	**Tarai**	**1,130**	**IX**	**Tarai**	**1,277**	**XII**	**Tarai**	**1,222**	**XV**	**Tarai**	**1,266**	**1,235**
8	Kanchanpur	1,341	22	Bardiya	,969	38	Kapilvastu	1,121	53	Chitwan	1,715	71	Siraha	880	
9	Kailali	1,184	23	Banke	1,370	39	Rupandehi	1,358	54	Parsa	1,406	72	Saptari	939	
			24	Dang-Deukhuri	1,061	40	Nawalparasi	1,310	55	Bara	2,156	73	Sunsari	1,381	
									56	Rautahat	871	74	Morang	1,617	
									57	Sarlahi	802	75	Jhapa	1,302	
									58	Mahotari	789				
									59	Dhanusa	994				
	Total	**1079**		**Total**	**988**		**Total**	**1,254**		**Total**	**1,597**		**Total**	**1,202**	**1,310**
													NEPAL		**1,310**

Source: UNDP. 2004; Appendix 2.1, Table 10, pp.154–157.

Population Growth Rate 1991–2001

A	FAR WEST	%	B	MID WEST	%	C	WEST	%	D	CENTRAL	%	E	EAST	%
I	**Mountain**	**1.78**	**IV**	**Mountain**	**1.71**	**VII**	**Mountain**	**2.23**	**X**	**Mountain**	**1.64**	**XIII**	**Mountain**	**1.12**
1	Darchula	1.82	10	Humla	1.66	25	Mustang	0.47	41	Rasuwa	1.97	60	Solu-Khumbu	1.02
2	Bajhang	1.83	11	Mugu	1.89	26	Manang	5.81	42	Sindhu-Palchok	1.59	61	Sankhuwa-Sava	1.15
3	Bajura	1.67	12	Kalikot	1.73				43	Dolakha	1.65	62	Taplejung	1.15
			13	Jumla	1.63									
			14	Dolpo	1.67									
II	**Hill**	**1.75**	**V**	**Hill**	**1.89**	**VIII**	**Hill**	**1.43**	**XI**	**Hill**	**2.79**	**XIV**	**Hill**	**1.4**
4	Baitadi	1.55	15	Dailekh	1.84	27	Argha Khanchi	1.42	C	With KV	2.79	63	Okhaldhunga	0.17
5	Dadheldhura	1.87	16	Jajarkot	1.68	28	Palpa	1.28	Ca	Without KV	1.78	64	Khotang	0.69
6	Doti	2.14	17	Rukum	1.92	29	Gulmi	1.08	44	Makwanpur	2.22	65	Bhojpur	0.95
7	Achham	1.54	18	Surkhet	2.45	30	Baglung	1.46	45	Dhading	1.97	66	Udayapur	2.63
			19	Salyan	1.61	31	Myagdi	1.29	46	Nuwakot	1.62	67	Dhankuta	2.1
			20	Rolpa	1.56	32	Parbat	0.95	47	Kabhre-Palanchok	1.73	68	Terhathum	1.29
			21	Pyuthan	1.91	33	Kaski	2.62	48	Ramechhap	1.22	69	Panchthar	1.43
						34	Syangja	0.78	49	Sindhuli	2.23	70	Ilam	2.1
						35	Tanahu	1.62	Cb	Kathmandu Valley	4.23			
						36	Lamjung	1.42	50	Kathmandu	4.71			
						37	Gorkha	1.32	51	Lalitpur	2.73			
									52	Bhaktapur	2.65			
III	**Tarai**	**3.86**	**VI**	**Tarai**	**2.8**	**IX**	**Tarai**	**2.76**	**XII**	**Tarai**	**2.6**	**XV**	**Tarai**	**2.16**
8	Kanchanpur	3.82	22	Bardiya	2.76	38	Kapilvastu	2.6	53	Chitwan	2.86	71	Siraha	2.17
9	Kailali	3.89	23	Banke	3.01	39	Rupandehi	3.05	54	Parsa	2.89	72	Saptari	2.03
			24	Dang-Deukhuri	2.66	40	Nawalparasi	2.55	55	Bara	2.96	73	Sunsari	3
									56	Rautahat	2.75	74	Morang	2.23
									57	Sarlahi	2.55	75	Jhapa	1.48
									58	Mahotari	2.29			
									59	Dhanusa	2.11			
	Total	**2.26**		**Total**	**2.26**		**Total**	**1.92**		**Total**	**2.61**		**Total**	**1.84**
													NEPAL	**2.25**

Source: CBS. 2003d; Table 2.5.

Population Density, 2001

A	FAR WEST	Density	B	MID WEST	Density	C	WEST	Density	D	CENTRAL	Density	A	EAST	Density
I	**Mountain**	**51**	**IV**	**Mountain**	**24**	**VII**	**Mountain**	**4**	**X**	**Mountain**	**81**	**XIII**	**Mountain**	**39**
1	Darchula	53	10	Humla	7	25	Mustang	4	41	Rasuwa	29	60	Solu-Khumbu	33
2	Bajhang	49	11	Mugu	12	26	Manang	4	42	Sindhu-Palchok	120	61	Sankhuwa-Sava	46
3	Bajura	50	12	Kalikot	61				43	Dolakha	93	62	Taplejung	37
			13	Jumla	35									
			14	Dolpo	4									
II	**Hill**	**119**	**V**	**Hill**	**116**	**VIII**	**Hill**	**182**	**XI**	**Hill**	**252**	**XIV**	**Hill**	**156**
4	Baitadi	154	15	Dailekh	150	27	Argha Khanchi	175	C	With KV	224	63	Okhaldhunga	146
5	Dadheldhura	82	16	Jajarkot	60	28	Palpa	196	Ca	Without KV	187	64	Khotang	145
6	Doti	102	17	Rukum	65	29	Gulmi	258	44	Makwanpur	162	65	Bhojpur	135
7	Achham	138	18	Surkhet	118	30	Baglung	151	45	Dhading	176	66	Udayapur	139
			19	Salyan	146	31	Myagdi	50	46	Nuwakot	257	67	Dhankuta	187
			20	Rolpa	112	32	Parbat	319	47	Kabhre-Palanchok	276	68	Terhathum	167
			21	Pyuthan	162	33	Kaski	189	48	Ramechhap	137	69	Panchthar	163
						34	Syangja	273	49	Sindhuli	112	70	Ilam	166
						35	Tanahu	204	Cb	Kathmandu Valley	1,830			
						36	Lamjung	105	50	Kathmandu	2,793			
						37	Gorkha	80	51	Lalitpur	877			
									52	Bhaktapur	1,895			
III	**Tarai**	**213**	**VI**	**Tarai**	**170**	**IX**	**Tarai**	**353**	**XII**	**Tarai**	**451**	**XV**	**Tarai**	**456**
8	Kanchanpur	235	22	Bardiya	189	38	Kapilvastu	277	53	Chitwan	213	71	Siraha	482
9	Kailali	191	23	Banke	165	39	Rupandehi	521	54	Parsa	367	72	Saptari	418
			24	Dang-Deukhuri	156	40	Nawalparasi	260	55	Bara	470	73	Sunsari	498
									56	Rautahat	484	74	Morang	455
									57	Sarlahi	505	75	Jhapa	428
									58	Mahotari	552			
									59	Dhanusa	569			
	Total	**128**		**Total**	**103**		**Total**	**180**		**Total**	**252**		**Total**	**217**
													NEPAL	**157**

Source: CBS. 2002; Table 1-2.

Levels Of Regional Development 1977

A	FAR WEST	Value	B	MID WEST	Value	C	WEST	Value	D	CENTRAL	Value	E	EAST	Value	Total
I	**Mountain**	**715**	**IV**	**Mountain**	**715**	**VII**	**Mountain**	**1,167**	**X**	**Mountain**	**1,160**	**XIII**	**Mountain**	**1,142**	**980**
1	Darchula	885	10	Humla	618	25	Mustang	1,416	41	Rasuwa	1,163	60	Solu-Khumbu	1,089	
2	Bajhang	715	11	Mugu	561	26	Manang	917	42	Sindhu-Palchok	1,225	61	Sankhuwa-Sava	1,456	
3	Bajura	544	12	Kalikot	422				43	Dolakha	1,091	62	Taplejung	882	
			13	Jumla	1,131										
			14	Dolpo	842										
II	**Hill**	**1,057**	**V**	**Hill**	**801**	**VIII**	**Hill**	**1,522**	**XI**	**Hill**	**1,730**	**XIV**	**Hill**	**1,375**	**1,297**
4	Baitadi	1,089	15	Dailekh	704	27	Argha Khanchi	972	C	With KV	1,730	63	Okhal dhunga	1,483	
5	Dadheldhura	1,228	16	Jajarkot	610	28	Palpa	1,788	Ca	Without KV	1,432	64	Khotang	908	
6	Doti	1,133	17	Rukum	550	29	Gulmi	1,373	44	Makwanpur	1,830	65	Bhojpur	1,290	
7	Achham	776	18	Surkhet	1,275	30	Baglung	1,359	45	Dhading	1,312	66	Udayapur	1,161	
			19	Salyan	777	31	Myagdi	1,289	46	Nuwakot	1,476	67	Dhankuta	1,993	
			20	Rolpa	657	32	Parbat	1,348	47	Kabhre-Palanchok	1703	68	Terhathum	1,469	
			21	Pyuthan	1,033	33	Kaski	2,391	48	Ramechhap	1,034	69	Panchthar	1,102	
						34	Syangja	1,507	49	Sindhuli	1,235	70	Ilam	1,596	
						35	Tanahu	1,847	Cb	Kathmandu Valley	2,327				
						36	Lamjung	1,492	50	Kathmandu	2,602				
						37	Gorkha	1,372	51	Lalitpur	2,296				
									52	Bhaktapur	2,083				
III	**Tarai**	**1,710**	**VI**	**Tarai**	**1,603**	**IX**	**Tarai**	**1,724**	**XII**	**Tarai**	**1,873**	**XV**	**Tarai**	**2,002**	**1783**
8	Kanchanpur	1,780	22	Bardiya	1,328	38	Kapilvastu	1,513	53	Chitwan	2,027	71	Siraha	1,579	
9	Kailali	1,640	23	Banke	1,918	39	Rupandehi	2,128	54	Parsa	2,184	72	Saptari	1,941	
			24	Dang-Deukhuri	1,564	40	Nawal parasi	1,532	55	Bara	1,946	73	Sunsari	2,079	
									56	Rautahat	1,996	74	Morang	2,299	
									57	Sarlahi	1,527	75	Jhapa	2,113	
									58	Mahotari	1,439				
									59	Dhanusa	1,993				
	Total	**1,160**		**Total**	**1,040**		**Total**	**1,471**		**Total**	**1,588**		**Total**	**1,507**	**1,353**
													NEPAL		**1,353**

Based on 40 variables.
Source: Shrestha, R.K. and P. Sharma. 1980; Map LX

Composite Development Index,2001

A	FAR WEST	Index	B	MID WEST	Index	C	WEST	Index	D	CENTRAL	Index	E	EAST	Index	Total
I	**Mountain**	**0.26**	**IV**	**Mountain**	**0.22**	**VII**	**Mountain**	**0.60**	**X**	**Mountain**	**0.44**	**XIII**	**Mountain**	**0.56**	**0.41**
1	Darchula	0.38	10	Humla	0.18	25	Mustang	0.57	41	Rasuwa	0.4	60	Solu-Khumbu	0.55	
2	Bajhang	0.18	11	Mugu	0.13	26	Manang	0.63	42	Sindhu-Palchok	0.42	61	Sankhuwa-Sava	0.58	
3	Bajura	0.22	12	Kalikot	0.24				43	Dolakha	0.49	62	Taplejung	0.54	
			13	Jumla	0.25										
			14	Dolpo	0.29										
II	**Hill**	**0.30**	**V**	**Hill**	**0.40**	**VIII**	**Hill**	**0.58**	**XI**	**Hill**	**0.57**	**XIV**	**Hill**	**0.56**	**0.48**
4	Baitadi	0.33	15	Dailekh	0.33	27	Argha Khanchi	0.48	C	With KV	0.57	63	Okhal dhunga	0.51	
5	Dadheldhura	0.39	16	Jajarkot	0.36	28	Palpa	0.65	Ca	Without KV	0.50	64	Khotang	0.51	
6	Doti	0.29	17	Rukum	0.36	29	Gulmi	0.56	44	Makwanpur	0.56	65	Bhojpur	0.54	
7	Achham	0.20	18	Surkhet	0.55	30	Baglung	0.56	45	Dhading	0.47	66	Udayapur	0.48	
			19	Salyan	0.46	31	Myagdi	0.56	46	Nuwakot	0.52	67	Dhankuta	0.65	
			20	Rolpa	0.32	32	Parbat	0.57	47	Kabhre-Palanchok	0.6	68	Terhathum	0.58	
			21	Pyuthan	0.41	33	Kaski	0.68	48	Ramechhap	0.41	69	Panchthar	0.56	
						34	Syangja	0.64	49	Sindhuli	0.41	70	Ilam	0.63	
						35	Tanahu	0.60	Cb	Kathmandu Valley	0.71				
						36	Lamjung	0.57	50	Kathmandu	0.77				
						37	Gorkha	0.54	51	Lalitpur	0.68				
									52	Bhaktapur	0.69				
III	**Tarai**	**0.52**	**VI**	**Tarai**	**0.55**	**IX**	**Tarai**	**0.50**	**XII**	**Tarai**	**0.41**	**XV**	**Tarai**	**0.51**	**0.50**
8	Kanchanpur	0.52	22	Bardiya	0.52	38	Kapilvastu	0.39	53	Chitwan	0.69	71	Siraha	0.38	
9	Kailali	0.51	23	Banke	0.55	39	Rupandehi	0.61	54	Parsa	0.41	72	Saptari	0.43	
			24	Dang-Deukhuri	0.57	40	Nawal parasi	0.51	55	Bara	0.39	73	Sunsari	0.61	
									56	Rautahat	0.26	74	Morang	0.63	
									57	Sarlahi	0.35	75	Jhapa	0.69	
									58	Mahotari	0.3				
									59	Dhanusa	0.44				
	Total	**0.36**		**Total**	**0.39**		**Total**	**0.56**		**Total**	**0.47**		**Total NEPAL**	**0.55**	**0.47 0.47**

Source: International Center for Integrated Mountain Development. 2003; Map 2.

Land Use and Population Change in Terai, 1963/64 -2000

S.No.	Particular	FAR WEST	WEST	EAST + CENTRAL	Total
I.	**Forest area decrease**				
1	1963/64 - 1978/79	-0.9	-3.4	-38.1	-17.2
2	1978/79 - 2001	-21.8	17.5	-11.7	17.7
3	1963/64 - 2001	-22.5	-20.3	-45.3	-31.9
II.	**Forest area, % of region**				
4	1963/64	72	48.8	40.5	51.1
5	1978/79	67.5	44.7	28.1	43.7
6	2001	55.7	36.1	24.7	36.3
III.	**Agri. Land increase**				
7	1963/64 - 1978/79	+120.7	+23.9	12.3	25.1
8	1978/79 - 2001	+44.1	+17.9	+10.5	17.7
9	1963/64 - 2001	+218.1	+46.1	+24.9	+47.2
IV.	**Agri.land, % of region**				
10	1963/64	12.8	43.8	51.1	38.5
11	1978/79	26.8	50.4	64.3	49.8
12	2001	40.9	58.2	70.6	59.2
V.	**Population increase %**				
13	1961 - 1981	206.1	129	91.6	107.7
14	1981 - 2001	113.6	82.6	60.2	71.1
15	1961 - 2001	553.8	318.2	207	255.5
VI.	**As % of total Population**				
16	1961	2.9	4.4	23.5	30.8
17	1981	5.5	6.4	28.2	40.1
18	2001	7.6	7.5	29.3	44.5

Sources: Forest Resources Survey. 1967; and Japan Forest Technology Association. 2000.

Land Use Categories by Phsiographic Division, 1977/78

S.N.	Dev. Region/ Physiographic Div.	Agriculture Cultivated	Agriculture Non-Cultivated	Grazing	Forest	Others	Total
A.	**FAR WEST**	**293,198**	**111,671**	**214,901**	**1,049,929**	**274,411**	**1,944,110**
1	High Himalaya	282	72	53,747	17,882	197,022	269,005
2	High Mountain	37,542	20,910	77,428	238,760	49,136	423,776
3	Middle Moutain	140,259	73,514	69,134	421,410	12,122	716,439
4	Siwalik	9,885	4,706	964	177,806	4,088	197,449
5	Terai	105,230	12,469	13,628	194,071	12,043	337,441
B.	**MID WEST**	**453,900**	**177,045**	**783,844**	**1,726,986**	**1,138,427**	**4,280,202**
6	High Himalaya	1,432	413	424,130	57,425	1,019,130	1,502,530
7	High Mountain	90,362	53,794	253,046	670,436	79,832	1,147,470
8	Middle Moutain	175,199	97,195	96,239	427,28	7,415	803,329
9	Siwalik	86,374	13,365	5,101	447,475	17,887	570,202
10	Terai	100,533	12,278	538	124,369	14,163	256,671
C.	**WESTERN**	**591,720**	**226,516**	**437,882**	**1,061,037**	**618,358**	**2935,513**
11	High Himalaya	5,427	1,091	290,248	57,364	528,739	882,869
12	High Mountain	39,274	23,471	78,954	288,974	59,114	489,787
13	Middle Moutain	308,653	177,517	63,166	451,012	11,437	1,011,785
14	Siwalik	32,056	9,937	2,514	182,323	10,405	237,235
15	Terai	206,310	14,500	3,000	81,364	8,663	313,837
D.	**CENTRAL**	**790,667**	**235,025**	**142,453**	**1,327,742**	**238,241**	**2,734,128**
16	High Himalaya	52	11	53,538	26,240	144,421	224,262
17	High Mountain	33,281	20,956	37,768	253,214	21,726	366,945
18	Middle Moutain	279,664	154,785	26,046	456,573	14,128	931,196
19	Siwalik	98,212	20,819	11,354	466,685	32,588	629,655
20	Terai	379,458	38,454	13,747	125,030	25,378	562,067
E.	**EASTERN**	**838,532**	**236,401**	**178,080**	**1,140,766**	**460,147**	**2,853,926**
21	High Himalaya	540	150	62,693	62,550	344,620	470,553
22	High Mountain	44,300	27,752	62,500	361,684	34,883	531,119
23	Middle Moutain	318,548	162,512	38,105	446,112	15,586	960,863
24	Siwalik	32,366	6,384	828	202,341	4,303	251,222
25	Terai	442,778	39,603	13,954	68,079	55,755	620,369
	Total	**2,968,017**	**986,658**	**1,757,160**	**6,306,460**	**2,729,584**	**14,747,879**

Source: Kenting Earth Sciences. 1986; Appendix 5, p.11.

Population, Area and Revenue of Proposed Districts

S.No.	REGION / DISTRICT	Elevation Zone	Population (2001)	Area (km2)	Revenue (1999/2000), NRs'000
I.	**FAR-WEST**		**2,307,741**	**21,280**	**472,221**
1	Byasrishi	Mountain/Hill	483,717	5,379	78,019
2	Saipal	Mountain/Hill	376,335	5,447	14,657
3	Malika	Mountain/Hill	447,767	5,609	9,261
4	Mohana Tarai		999,922	4,845	370,284
II.	**MID-WEST**		**2,916,430**	**40,637**	**791,428**
5	Karnali	Mountain	204,007	19,610	15,264
6	Babai	Hill/Tarai	1,290,555	8,315	640,938
7	Bheri	Hill	535,581	6,569	20,301
8	Swargadwari	Hill/Inner Tarai	886,287	6,143	114,925
III.	**WEST**		**4,569,622**	**29,398**	**3,455,400**
9	Dhaulagiri	Mountain	129,931	5,870	16,358
10	Riri	Hill	775,467	4,126	63,312
11	Srinagar	Hill/Tarai	2,016,718	6,633	2,881,131
12	Annapurna	Hill	1,172,550	5,221	458,899
13	Manaslu	Mountain/Hill	474,956	7,548	35,700
IV.	**Central**		**8,059,050**	**27,411**	**33,736,620**
14	Trisuli	Mountain/Hill	671,652	4,591	43,915
15	Kathmandu	Hill	1,656,951	899	21,960,634
16	Rapti	Inner Tarai	860,005	4,644	1,678,920
17	Sailung	Mountain/Hill	1,108,554	7,676	961,106
18	Simaraon	Tarai	1,599,191	3,669	8,251,342
19	Kamala	Inner Tarai/Tarai	2,162,697	5,932	840,703
V.	**EAST**		**5,363,395**	**28,457**	**1,574,083**
20	Sagarmatha	Mountain/Hill	496,441	6,146	41,051
21	Chaudandi	Inner Tarai/Tarai	1,438,153	4,614	278,540
22	Arun	Mountain/Hill	530,577	6,044	44,767
23	Bijayapur	Tarai	1,471,953	3,112	321,366
24	Tamor	Mountain/Hill	452,276	5,232	35,100
25	Kankai	Hill/Tarai	973,995	3,309	853,259
	NEPAL		**23,216,238**	**147,183**	**40,029,752**

Source: Gurung, H. 2002; p.27.

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