

**Draft**  
**North Eastern Council**  
**Regional Plan**  
**(2017-18 to 2019-20)**

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## **Part I**

### **Introduction and Funding of the NEC Plans**

## I - Introduction

Except for the State of Arunachal Pradesh which used to be a Centrally-administered territory known as North East Frontier Agency (NEFA), Sikkim which used to be a protectorate of India and later joined the Indian Union and Manipur as well as Tripura which were princely States which acceded into the Indian Union in October 1949, became Union Territories in 1956 and full-fledged States in 1972, all other States were part of the erstwhile composite State of Assam. Nagaland was the first to get separate statehood and the rest became separate States consequent upon the implementation of the States Re-organization Act, 1971. These North Eastern States were re-organized mainly on linguistic basis and due to political exigencies emanating from so much of diversity in ethnicity, culture and levels of underdevelopment. Hence, they were not economically viable and had to depend heavily on the Central Government for financial assistance, especially Plan assistance, which continues to be given on a 90:10 basis, i.e. 90% is central assistance while the States themselves raise only 10% of the budget. The States are thus known as Special Category States. Even after more than four decades of their existence, these States continue to be in the backwaters of economic development and still need a great deal of concerted effort to bring them at par with the more developed States of the country. The North Eastern Council which was created to complement and supplement the developmental efforts of the States has already contributed immensely in terms of institution building, transport and communication, power generation and transmission and creation of different kinds of infrastructural facilities with a view to positioning the States to launch themselves into a self-sustaining growth trajectory. However, a lot remains to be done since the gap between the NE States and other States of the country keeps on getting widened. Hence, the NEC Secretariat has been trying to identify thrust areas as well as critical gaps for taking up as many development initiatives as possible within its given annual budgetary allocation.

### 1. Area & Population

The North Eastern Region of India is a landlocked landmass which has over 5,000 km of international border with Bhutan, China, Myanmar and Bangladesh. It is also by and large isolated from the rest of India in the sense that it is connected to the rest of the country by only a very narrow stretch of land which is about 20 km wide. The eight States constituting the North Eastern Region are Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura. The region's total geographical area is 2,62,179 square kilometres which is 8% of the country's total geographical area and its total population is 45,587,982 which is 3.1% of the country's total population according to the 2011 census. The State-wise break-up of area and population is given below: -

Name of State	Total Geographical Area (Sq. Km.)	Total Population
Arunachal Pradesh	83,743	1,382,611
Assam	78,438	31,169,272
Manipur	22,327	2,721,756

Meghalaya	22,429	2,964,007
Mizoram	21,081	1,091,014
Nagaland	16,579	1,980,602
Sikkim	7,096	607,688
Tripura	10,486	3,671,032

In terms of density of population, Assam is the most densely populated State (398) followed by Tripura (350), Meghalaya (132), Nagaland (119), Manipur (115), Sikkim (86), Mizoram (52) and Arunachal Pradesh ((17). The national average density of population is 382.

## **2. Location & Physiography**

Barring Sikkim, the region lies roughly between 90 degrees and 97 degrees east longitude and between 22 degrees and 29.5 degrees north latitude. Hence, a major part of the region lies within temperate zone but depending on altitude, some parts of the region experience tropical or sub-tropical type of climate while some other parts enjoy temperate climate. Topographically, the region falls into three main divisions – (1) the young fold mountainous chain in the north bordering China known as the Eastern Himalayas which turns southward at the north eastern most corner of Arunachal Pradesh and extends towards the southernmost tip of Mizoram where they are known as the Patkai-Naga Hills and Lushai Hills, (2) the Brahmaputra basin, the Barak basin and the Imphal Valley, and (3) the Meghalaya plateau which extends into Karbi Anglong and Dima Hasao (erstwhile Mikir and North Cachar Hills). While the first and the second physiographic divisions are of recent geological age, the Meghalaya Plateau is said to be more than 600 million years old. It is considered to be an outcrop of the Deccan Plateau which is separated by the Rajmahal-Garo Hills gap or trough. Even then, the whole region is considered to be highly active seismically and, coupled with the frequent recurrence of floods, needs to be accorded top priority from the natural disaster management point of view. Environmental activists have; therefore, been highly critical of mega government projects especially in the hydro power sector and the implementation of many projects had been adversely affected. Such fears have to be effectively dispelled through adoption of advanced technology incorporating safety measures of the highest level so that the region does not remain perpetually underdeveloped.

## **3. Climate, Vegetation & Soil**

The whole of the North Eastern Region comes under the influence of the monsoon type of climate which means that rainfall is received mainly during the months of May-June to September-October. The rainfall average in the region is more than 2000 mm. and the rainiest places like Cherrapunjee and Mawsynram get more than 11,000 mm. of rain every year. Winter in the region is comparatively long whereas spring and autumn are shorter in duration. Assam and Tripura being plain areas and Mizoram being nearer to the Tropic of Cancer experience higher temperatures compared to the other States. However, altitude which varies from about mean sea level in Assam and Tripura to about 7000 metres in the

Eastern Himalayas also determines temperature as well as rainfall to a very significant extent. Thus winters are comparatively mild in Assam, Tripura and Mizoram while they are more or less severe in the other States. Due to high rainfall, soils in the mountainous and hilly region are highly leached and acidic whereas soils in the plains are alluvial and very fertile. Depending on climate and soil types, different types of vegetation can be found in this region ranging from tropical deciduous types which shed their leaves in winter to temperate and alpine types which are evergreen. Different species of flora and fauna abound in the region which is also considered to be one of the more important bio-diversity hot spots in the world. Given the range of diversity of climate, soil and vegetation found in the region, it can be said that the States of NER are capable of achieving a much higher level of sustainable development provided that proper resource management can be effectively ensured. The region is thus an area which presents many challenges as well as opportunities and its full potential has both to be explored and exploited for the benefit of its people.

#### **4. Mineral Resources**

NER is bountifully endowed with different kinds of mineral resources. The more important ones are petroleum, coal, limestone, chromite, dolomite, sillimanite, graphite, fire-clay and clay for the manufacture of white-ware, feldspar and glass-sand. Occurrences of some base metals, ferrous-alloy metals, rare metals and other minerals including semi-precious stones have also been detected. However, more detailed prospecting and exploration work has to be undertaken to determine the potential reserves before economic exploitation can be taken up. As far as petroleum is concerned, the NER has the distinction of being the first part of the country where oil was successfully drilled and produced. Coal is found mainly in Assam, Meghalaya, Arunachal Pradesh and Nagaland. While the reserves in Meghalaya was estimated to be about 200 million tonnes, the reserves in Upper Assam and the adjoining parts of Arunachal Pradesh and Nagaland was estimated to be around 500 million tonnes. Limestone deposits are found extensively throughout the NE Region. In some places, the chemical composition is of such a high grade that the limestone is considered usable even for pharmaceutical preparations. A good number of lime kilns and some cement factories have come up in the region due to the abundant availability of high quality limestone. It is inferred that the total reserves of limestone in the region is of the order of 900 million tonnes. However, the region is yet to fully exploit its mineral resource potential and develop the secondary sector of the economy to the optimal level that is achievable.

#### **5. Human Development Index**

The following Table showing the Human Development Index is taken from the Human Development Report of North East States published by the M/ DoNER in December 2011. It can be seen that Mizoram, Nagaland and Manipur are in the top half while Assam, Arunachal Pradesh and Tripura are in the bottom half. While Arunachal Pradesh and Assam are incidentally the two largest States in terms of geographical area, Assam and Tripura are

the two most populous States. It is also interesting to note in the next section that Assam's GSDP is the highest while its per capita NSDP is the lowest. The Table clearly indicates that these States still have a long way to go to bring about a higher level of all-round human development which is a critical factor for improving the overall quality of its workforce.

State	2004-05				
	HDI	HDI Rank	X1	X2	X3
Arunachal Pradesh	0.427	7	0.491	0.334	0.475
Assam	0.364	8	0.364	0.382	0.345
Manipur	0.521	3	0.706	0.487	0.369
Meghalaya	0.455	5	0.540	0.380	0.446
Mizoram	0.584	1	0.657	0.572	0.523
Nagaland	0.570	2	0.662	0.512	0.535
Sikkim	0.509	4	0.666	0.391	0.469
Tripura	0.447	6	0.534	0.415	0.390

In the above Table, X1 is Quality of life Index; X2 is Quality of opportunity Index and X3 is the Economic Well-being Index.

## 6. Sector-wise Break-up of GSDP

It can be seen from the Table below that Assam's GSDP is far bigger than that of the other NE States combined. Assam is in a far more advantageous position in this regard due to a number of historical factors apart from its sheer size in terms of area and population. However, other States are also trying to do their best to bring about all round development in the socio- economic life of people within their jurisdiction. During the past two/ three decades especially, a large part of this region has been plagued by insurgency and militancy which took a heavy toll of the economic gains of many States by creating a sense of insecurity among investors whose perception of the region as a most favoured destination for investment got severely eroded. The low credit-deposit ratio of commercial banks in the region is one of the indicators that attracting investment to the region is a big challenge.

(Rs. In lakh)

Name of State	GSDP at Factor Cost by Industry of origin at Current Prices		GSDP at Factor Cost by Industry of origin at 2004-05 Prices	
	2011-12	2013-14(#)	2011-12	2013-14 (#)
Arunachal Pradesh	<b>1,039,616</b>	<b>1,349,103</b>	<b>544,403</b>	<b>614,107</b>
<i>Primary</i>	439,919	547,494	163,993	167,558
<i>Secondary</i>	275,112	383,118	164,929	208,460
<i>Tertiary</i>	324,585	418,491	215,481	238,089
Assam	<b>12,582,007</b>	<b>16,265,224</b>	<b>7,885,109</b>	<b>8,853,717</b>
<i>Primary</i>	3,218,020	4,155,039	1,725,451	1,882,870
<i>Secondary</i>	3,156,784	3,881,490	1,747,312	1,882,851
<i>Tertiary</i>	6,207,203	8,228,695	4,412,346	5,087,996
Manipur	<b>1,108,305</b>	<b>1,248,423</b>	<b>733,506</b>	<b>762,526</b>
<i>Primary</i>	240,849	260,842	145,101	148,888
<i>Secondary</i>	280,888	295,877	207,149	211,246
<i>Tertiary</i>	586,568	691,703	381,256	402,391

Meghalaya	<b>1,719,857</b>	<b>2,104,460</b>	<b>1,172,291</b>	<b>1,346,528</b>
<i>Primary</i>	268,285	317,094	182,173	196,086
<i>Secondary</i>	577,143	682,321	384,066	422,430
<i>Tertiary</i>	874,429	1,105,045	606,052	728,011
Mizoram	<b>688,957</b>	<b>836,292</b>	<b>485,206</b>	<b>520,289</b>
<i>Primary</i>	137,955	151,960	101,221	101,257
<i>Secondary</i>	128,546	184,122	83,791	85,557
<i>Tertiary</i>	422,474	500,210	300,194	333,475
Nagaland	<b>1,385,934</b>	<b>1,774,932</b>	<b>1,002,385</b>	<b>1,136,706</b>
<i>Primary</i>	353,999	466,534	267,043	288,645
<i>Secondary</i>	200,393	249,352	132,630	155,011
<i>Tertiary</i>	831,542	1,059,046	602,712	693,050
Sikkim	<b>890,664</b>	<b>1,237,669</b>	<b>529,904</b>	<b>615,231</b>
<i>Primary</i>	100,053	124,798	55,212	58,307
<i>Secondary</i>	541,391	778,179	313,661	372,800
<i>Tertiary</i>	249,220	334,691	161,031	184,124
Tripura	<b>2,098,174</b>	<b>2,385,470</b>	<b>1,563,667</b>	<b>1,699,667</b>
<i>Primary</i>	467,507	508,911	393,385	413,621
<i>Secondary</i>	435,985	431,487	335,672	344,901
<i>Tertiary</i>	1,194,682	1,445,072	834,609	941,145

(#) The figures in these columns in respect of the States of Manipur, Mizoram and Tripura pertained to 2012-13. [Source: Basic Statistics of NE 2015]

The per capita Net State Domestic Product at current prices (2004-05 Series) and its growth during 2013-14 is given in the Table below: -

Name of State	Per Capita NSDP during 2013-14 in Rupees	Growth of Per Capita NSDP during 2013-14 (Percentage change over previous year)
Arunachal Pradesh	85468	11.9
Assam	44263	13.7
Manipur	41573	10.4
Meghalaya	61548	13.6
Mizoram	76120	20.0
Nagaland	77529	10.3
Sikkim	176491	16.6
Tripura	69705	21.4
<b>All India</b>	<b>74380</b>	<b>9.6</b>

From the above Table, it can be seen that Assam, Manipur, Meghalaya and Tripura have lower per capita NSDP as compared with the national figure although all the States showed higher growth rates ranging from 10.4% to 21.4% vis-à-vis the all-India growth rate. However, as pointed out by NITI AAYOG in its recent note, the preponderance of the Government Sector in most of the NE States is a worrisome factor. Therefore, even in the Tertiary Sector, it would be far more desirable that growth should come mainly from the non-Government Sector. Productivity growth in the Primary Sector and growth of investment in the Secondary Sector should also receive due attention. As an effort in that direction, all the States of the region should also aim to significantly increase their pool of



highly skilled and trained manpower considering the importance of this factor as a determinant of investment and economic development. This will also help in ensuring that the gains of growth and development are more evenly distributed leading thereby to greater overall welfare, less inequality and less social unrest.

In the chapters that follow, a Sector-wise outline of development plans and projects has been made for the coming two to three years with a view to accelerating the pace of development which had remained stagnant during the past five to ten years due to highly inadequate budgetary provision in the Five Year Plans and Annual Plans of the North Eastern Council which resulted in its inability to fully meet the expectations of its constituent States. It is hoped that the present government at the Centre will adequately and proactively redress the long pending grievances of the people of this region by ensuring that what has been proposed in the subsequent pages do not meet the same fate, namely fund crunch. At the same time, it is hoped that all the States of the region would also vastly improve their implementation machinery so as to dispel the impression that they do not actually have the capacity to absorb more fund and effectively utilise the same within given timeframes.

## II - Funding and resources for the Plan

There is a need to provide adequate allocation of funds to the NEC to service the projects proposed under this Plan. It is a fact that the trend of receiving less allocation has resulted in many decisions of the NEC remaining unimplemented, and if, the present state continues, the Regional Plan would fall short of serving any meaningful purpose. The allocations substantially decreased from the 9th FYP onwards which stood at 5.12% of the total outlays for the NER to about 0.03% in the financial year 2016-17. During the 12th FYP, the proposed outlay was Rs 13027.38 crore out of which Rs 6108.00 was approved. The final allocation was Rs. 3622 crores which is only 61 % of the approved outlay of Rs. 6108 crores. The year-wise budgetary allocations of NEC during the 12th FYP has been stagnant and in real terms has, in fact, decreased as can be seen from the table below:

**Budgetary Allocations for NEC (Rs. in crore)**

Financial Year	BE	RE (actual allocation)
2012-13	770	770
2013-14	770	700
2014-15	770	579
2015-16	773	773
2016-17	800	920
<b>Total</b>	<b>3883</b>	<b>3742</b>

This has been a cause of concern for the NE states which have considerable expectations from the NEC. The concern is that even in nominal terms, the allocation has gone down whereas the demand of the constituent States of NEC is on an average of Rs. 4800 crores annually. The constant demand for enhancement of NEC's budgetary allocations has been made mainly on the grounds that the amount budgeted for the NEC is too small to make any meaningful impact on the development of inter-state infrastructure or human development. There is a large gap between the resources made available and the aspirations of the States and without a quantum jump in the NEC allocation, it will be difficult for NEC to provide funds for core areas and for large projects with Inter-State/regional character which in fact is the mandate of NEC.

It may be mentioned that from the 1998-99 Union Budget onwards, a pool of non-lapsable Central funds (NLCPR) had been created for the North East and Sikkim which was meant for funding development projects in the region so that resources gaps could be filled up. At least 10% of the budgets of the central ministries were earmarked for the development of NER and unspent balances would accrue to the NLCPR for future spending on NER. **Presently, over Rs 15,000 crores of NLCPR has accumulated, while at the same time, the quantum of funds allocated to NEC has been declining.** This has greatly impacted the rate of growth of the infrastructure and economy of the NER.

Development must be backed by adequate and consistency of funding. The Department-Related Parliamentary Standing Committee on Home Affairs in its One Hundred Ninety First Report on Demands for Grants (2015-16) had observed that the declining trend in the FYP allocation to NEC has limited NEC's capacity to take up new projects. The Department-Related Parliamentary Standing Committee, in its One Hundred Ninety Sixth Report on Demands for Grants (2016-2017) of the Ministry of Development of North Eastern Region stated that *"instead of opening many windows for funding projects in the NER, the Government should channelize its funds through mandated institutions and therefore recommends for granting more funds to the NEC in order to complete its committed liabilities towards development of the area and also enable it to go for new projects as per the mandate given to it by the Government of India."* **The 2nd Administrative Reform Commission has also recommended that NEC should implement development projects under NLCPR.**

Historically, 56.04 % of the NEC budget has been spread across the eight states while the rest has been funded directly to Central Agencies like the ICAR, BRO, AAI for executing inter-state projects and for setting up major iconic Institutes like NEEPCO, RIMS, NEPA, NERIST etc (**Table I**). Sector-wise spending has been concentrated mainly on Infrastructure (47%) followed by Agriculture (14%) Human Resource (11%) and Power (9%) (**Table II & Figure I**).

#### **Requirement of resources**

In order to implement the proposals made in this Plan, there is a requirement to augment the NEC's resources to approximately Rs 2,500 crores every year, i.e. Rs 7,500 crore for the 3 year Plan period. Since the normal Budget of NEC is expected to be around Rs 1,000 crore annually for the next three years, the gap of Rs 1,500 crore each year is proposed to be met from NLCPR where accruals amount to more than Rs 1,600 crore every year.

There are existing liabilities totalling Rs 2,347 crores in various Sectors in the NEC, the highest being Transport and Communication with Rs 886 crores, Agriculture with Rs 535 crores and HRD with Rs 200 crores. Considering the sectoral importance and existing liabilities, allocation of the Rs 7,500 crore over the Plan period is proposed as in **Table III**.

**Table I - State-wise release of funds to North Eastern States Since Inception**

(Rs. In crore)

State	Total since inception to 11 <sup>th</sup> FYP	12th Five Year Plan					Total since inception to 2016-17	%
		2012-13	2013-14	2014-15	2015-16	2016-17#		
<b>Arunachal Pradesh</b>	795.92	91.70	82.17	62.21	104.62	33.77	1170.39	8.28
<b>Assam</b>	1426.32	91.40	69.78	46.05	26.88	32.71	1693.14	11.98
<b>Manipur</b>	353.97	52.55	85.89	48.03	154.80	76.33	771.57	5.46
<b>Meghalaya</b>	623.30	86.35	52.26	56.11	70.59	18.92	907.53	6.42
<b>Mizoram</b>	585.09	83.18	55.34	36.81	80.85	59.27	900.54	6.37
<b>Nagaland</b>	545.96	84.00	119.61	93.02	93.62	88.03	1024.24	7.25
<b>Sikkim</b>	298.95	55.84	53.89	33.97	31.82	13.64	488.11	3.45
<b>Tripura</b>	741.81	37.99	84.37	61.79	31.02	6.63	963.61	6.82
<b>NE States</b>	<b>5371.32</b>	<b>583.01</b>	<b>603.31</b>	<b>437.99</b>	<b>594.20</b>	<b>329.30</b>	<b>7919.13</b>	<b>56.04</b>
<b>Other agencies*</b>	5375.47	149.75	94.74	140.99	170.62	280.41	6211.98	43.96
<b>GRAND TOTAL</b>	<b>10746.79</b>	<b>732.76</b>	<b>698.05</b>	<b>578.98</b>	<b>764.82</b>	<b>609.71</b>	<b>14131.11</b>	<b>100.00</b>

# Fund Released is upto 31<sup>st</sup> December, 2016

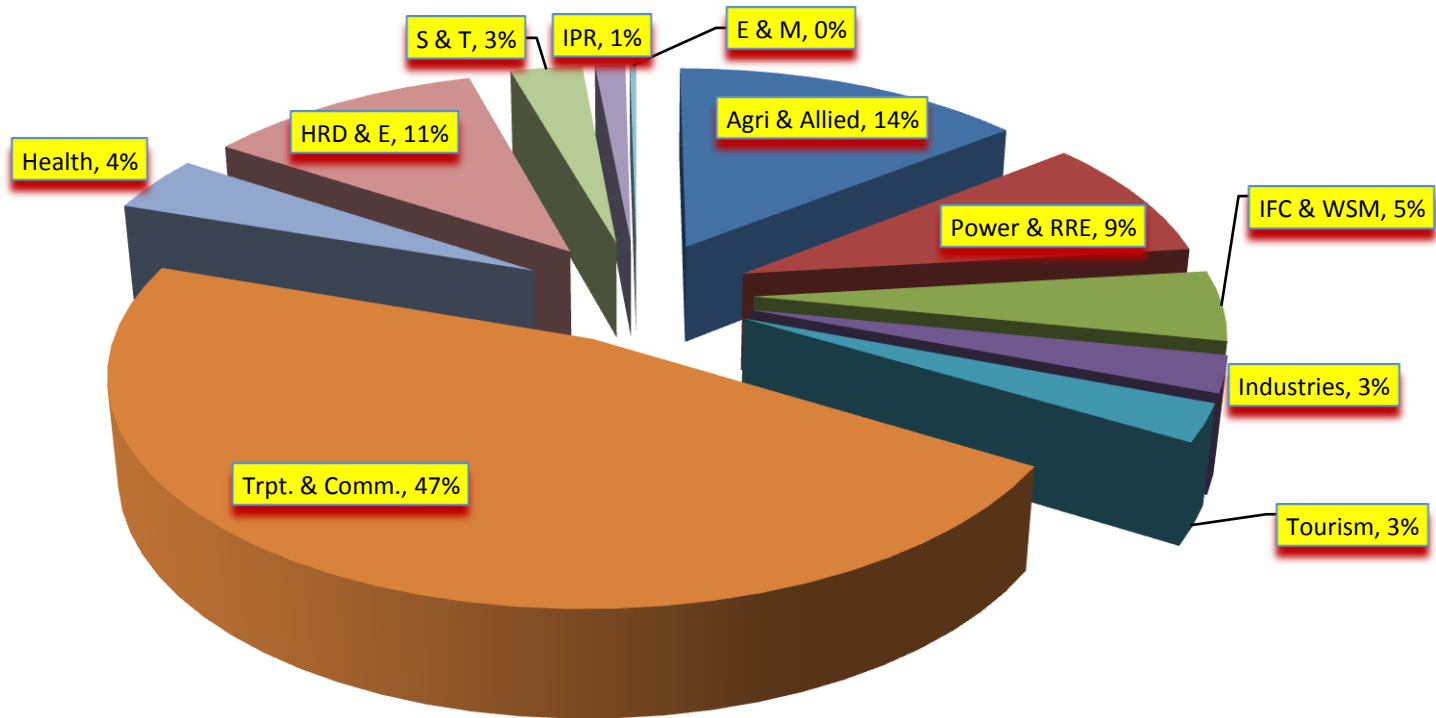
\*Other Agencies include Regional Institutes like NEPA, NEEPCO, RIMS etc

**Table – II Allocation among Sectors in the NEC during the last five years**

Sl. No	Sectors	Releases made during (In Rs. crore)									
		2012-13		2013-14		2014-15		2015-16		2016-17	
		Alloc	Expdn	Alloc	Expdn	Alloc	Expdn	Alloc	Expdn	Alloc	Expdn*
[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
I	<b>Agri &amp; Allied</b>	80.00	77.34	80.18	81.98	98.25	98.25	105.68	104.42	224.60	122.09
II	<b>Power &amp; RRE</b>	74.00	66.50	74.00	73.65	40.43	40.43	70.00	69.99	35.00	48.31
III	<b>IFC &amp; WSM</b>	39.50	36.19	33.00	45.84	30.00	30.00	46.19	45.95	16.00	13.97
IV	<b>Industries</b>	11.00	11.50	24.61	24.16	9.23	9.23	34.29	34.03	17.75	11.15
V	<b>Tourism</b>	24.90	21.99	28.05	30.64	5.58	5.58	25.31	24.68	17.10	9.05
VI	<b>Trpt. &amp; Comm.</b>	396.80	368.40	324.05	319.84	292.54	292.53	341.05	340.92	290.17	259.33
VII	<b>Health</b>	47.00	45.92	38.50	26.81	29.82	29.82	17.05	17.05	28.42	18.43
VIII	<b>HRD &amp; E</b>	70.50	76.82	73.50	69.70	42.69	42.69	90.98	90.74	127.75	102.13
IX	<b>S &amp; T</b>	17.50	17.44	17.93	17.69	23.29	23.29	26.37	25.28	20.80	15.28
X	<b>IPR</b>	6.30	8.89	5.40	7.05	5.29	5.29	13.27	13.23	14.60	7.05
XI	<b>E &amp; M</b>	2.50	1.76	0.78	0.69	1.88	1.87	2.01	1.47	7.81	2.92
	<b>Total</b>	<b>770.00</b>	<b>732.75</b>	<b>700.00</b>	<b>698.05</b>	<b>579.00</b>	<b>578.98</b>	<b>772.20</b>	<b>767.76</b>	<b>800.00</b>	<b>609.71</b>

\*Expenditure till 31<sup>st</sup> December, 2016

**Figure I - NEC Sectoral Expenditure since inception as percentage of total Expenditure**



**Table III**  
**Proposed Sectoral Allocation for each of the three years of the Regional Plan (Rs crores)**

Sector	2017-18 (Y1)			2018-19 (Y2)			2019-20 (Y3)			Total allocation	Total Sector %
	Allocation	Regional Plan (20%)	Liabilities (80%)	Allocation	Regional Plan (40%)	Liabilities (60%)	Allocation	Regional Plan (40%)	Liabilities (60%)		
<b>Agri &amp; Allied</b>	400	80	320	350	140	210	300	120	180	<b>1050</b>	<b>14.0%</b>
<b>Power &amp; RRE</b>	250	50	200	200	80	120	200	80	120	<b>650</b>	<b>8.7%</b>
<b>IFC &amp; WSM</b>	150	30	120	150	60	90	150	60	90	<b>450</b>	<b>6.0%</b>
<b>Industries</b>	150	30	120	150	60	90	200	80	120	<b>500</b>	<b>6.7%</b>
<b>Tourism</b>	150	30	120	200	80	120	200	80	120	<b>550</b>	<b>7.3%</b>
<b>Trpt. &amp; Com</b>	750	150	600	750	300	450	750	300	450	<b>2250</b>	<b>30.0%</b>
<b>Health</b>	200	40	160	250	100	150	250	100	150	<b>700</b>	<b>9.3%</b>
<b>HRD &amp; E</b>	250	50	200	200	80	120	200	80	120	<b>650</b>	<b>8.7%</b>
<b>S &amp; T</b>	100	20	80	150	60	90	150	60	90	<b>400</b>	<b>5.3%</b>
<b>IPR</b>	50	10	40	50	20	30	50	20	30	<b>150</b>	<b>2.0%</b>
<b>E &amp; M</b>	50	10	40	50	20	30	50	20	30	<b>150</b>	<b>2.0%</b>
<b>Total</b>	<b>2500</b>	<b>500</b>	<b>2000</b>	<b>2500</b>	<b>1000</b>	<b>1500</b>	<b>2500</b>	<b>1000</b>	<b>1500</b>	<b>7500</b>	<b>100.0%</b>

**Part II**  
**Infrastructure & Infrastructure-related Sectors**



### III - Transport and Communication Sector

#### A. Roads and Bridges

In the NE Region, the total population of a little over 47 million covering an area of 2, 62, 00 sq.km and the total length of different types of road is 3,76,819 km. out of which the length of National Highway around 13,500 km (*as per the Ministry of Road Transport and Highways data published in August 2012*) and the average road density per 100 Sq Km of area is 143.72Km against the national average of 115.30 Km. The cost of maintenance of these roads is also much more than the national average due to the terrain, soil types, high rainfall, long duration of monsoon and shorter working season of maximum five months or so. The region is prone to landslides and earthquakes which further add to the cost of maintenance.

It is a fact that due to the unique topographical diversity in such a small area with sparsely distributed population in small hamlets, where the locations of habitations varies from about 20 meters from Mean Sea Level to more than 5,000 meters, the requirement of such huge length of road connectivity cannot be ruled out. The revenue collection of the States is small to repair the roads regularly and the States have to depend on the central funding to a great extent to run the affairs of the States, like the salaries of its employees. This is one of the basic reasons for the under development and also partly for the growing unrest in some parts of the region.

The Areas under Road communication that will be serviced through the Regional Plan of the NEC will be as follows:-

#### 1. North East Roads Sector Development Scheme (NERSDS).

Since inception, NEC has contributed a lot for the development of Interstate roads connectivity in the Region since its inception. So far, more than 10,400 Km of roads in the Region has been funded from the Council and some of these roads have already been converted as National Highways by the Ministry of Road Transport and Highways. Keeping in view the importance of road connectivity in the Region, in the recent times, NEC has identified 47 numbers of interstate roads, the total length of which is 1,666 km and estimated cost of Rs 5,000 crores from amongst the following:

- Roads built by NEC and other agencies which are of vital connectivity for one state, but of little importance for other state and hence remained neglected, but with available formation width.
- Road in socio-politically neglected pockets of NER.
- Roads required from security or strategic viewpoint not covered in other programmes of Govt of India
- Roads necessary from the viewpoint of market access for agriculture produce and roads of economic importance on gap-filling approach.

Due to reasons indicated above, these roads were identified by NEC as orphan roads keeping in view the importance of interstate connectivity. Now, these roads are to be taken up for funding in a phased manner after the DPR of the same have been prepared. The Ministry of DoNER accordingly launched a Scheme called the North East Roads Sector Development Scheme (NERSDS), to be implemented by the NHIDCL (National Highway Infrastructure Development Corporation Ltd.) and the following four roads were identified in to take up immediately.

- i. Up-gradation of Doimukh Harmuti Road in Assam and AP*
- ii. Up-gradation of Tura Mankachar Road in Assam and Meghalaya*
- iii. Rehabilitation of Wokha Merapani Road in Assam and Nagaland*
- iv. Rehabilitation /Up-gradation of Kawnpui Bairabi Road in Mizoram.*

As per the sanction, the duration of the scheme is for two years, i.e up to March, 2017 with an estimated cost of Rs. 450.00 Crores, out of which a sum of Rs. 225.00 crores has already been released to NHIDCL. The scheme has since been transferred to NEC in the month of June, 2016 and the Inter ministerial Committee under the chairmanship of Secretary, NEC was also re-constituted. Presently, to achieve the goal of the scheme, it needs to be extended along with budgetary support of at least Rs. 5,000 crores.

## **2. Conversion of SPT bridges to permanent ones**

There are number of weak SPT/bailey bridges in the Region. An exercise was taken up for collecting the data pertaining to the existing timber/bailey bridges in the region. As on date the numbers of semi permanent timber (SPT) bridges of the region is 1132. The total length of all these bridges altogether is more than 32 km. The State Governments of the region do not seem to have sufficient resources to convert these bridges to permanent bridges. The Ministry of RTH may develop a scheme in the line of SARDP-NE to convert all these bridges with RCC permanent bridges.

## **3. Construction of foot bridges**

Due to the Geo political location of the Region, the door to door connectivity in all the places may not be possible and viable. However, some of the states are providing connectivity to small isolated hamlets by constructing Suspension Foot bridges, which are technically feasible and economically viable. Thus, a scheme for connecting such villages may be conceived. Recently, one such project for Sikkim has been funded by the NEC. Construction of footbridges in the 8 NE states shall require Rs 1,500 crores (approx).

## **4. Clearance of bottlenecks for supply of construction materials**

As most of the delays in case of Highway projects is due to non availability of the Minor minerals like Stone aggregates and Sand and this is due to the fact of non-availability of any such Policy with the State Govt, a Policy needs to be developed by the Sate Govts., so as to assure the supply of the materials in a time bound manner. The States may be requested to

ascertain the total requirement of minor minerals for the infra development of the region and earmark the quarries in the states with proper clearance from the Ministry of Environment and Forest.

#### **5. Coverage of all habitations**

There are number of habitations with less than 250 populations, which are not covered for connectivity under PMGSY Scheme of Ministry of Rural Development. However, due to the strategic location of the Region, the population criteria needs to be relaxed for the villages/habitations within 50 Km of International border so as avoid the migration of the population from the border areas. All villages in this range may be covered under the PMGSY irrespective of their size

#### **6. Provision of basic road side amenities**

The basic road side amenities are not in place even along the National Highways/Toll roads. This needs to be reviewed and the basic road side amenities all along the National/State Highways should be provided at least at every 50 Km

#### **7. Mechanism for monitoring of road projects**

A three tier Joint Mechanism of Monitoring for all the projects should be developed from Center to State and district level so as to sort out various issues in the implementation of the projects at all levels. Satellite technology may also be used for monitoring the projects.

#### **8. Quality control and maintenance issues**

The peculiarity of the terrain, severity of the monsoon demands high standards of quality for the NE Region's roads. Focus should also be given to the maintenance of the assets than on creation of new assets. As per the policy in place, all the centrally funded road projects except the National Highways are transferred to the State Governments for maintenance after construction. From the recent trend of expenditure for construction of the new roads in NER by NHIDCL it has been observed that even for widening of the existing roads to two lane standard, the cost per kilometre ranges from Rs 10 to 15 crore depending upon the terrain and location of the project. On the other hand, the cost of maintenance per year for the existing road is around Rs 8 to 10 lakh per kilometre per year. The total revenue of the region during financial year 2015-16 was around Rs. 1,10,000 crore and the requirement of the funds to maintain the roads is about Rs. 37,000 crore. In case of NLCPR road projects, all DPRs are required to have an in-built provision of maintenance for a period of five years from the date of completion. Similarly in respect of roads constructed / upgraded under the PMGSY, as per the Standard Bidding Document, five year routine maintenance is contracted out along with the construction itself to the same contractor who is constructing the road. Thus,

- In view of the strategic, geological, climatic and seismic conditions of the NER, there is a need for setting up of Road Research and Development Centres in the Region for testing new technology and quality control.
- A certain portion of the Roads budget should be earmarked for maintenance as in the case of NLCPR and PMGSY roads.
- A separate scheme may also be devised by the MoRTH to study and fund the rehabilitation of the landslides of the region, mainly along the important roads of the region other than the National Highways.
- NEC may adopt IRC standard in all road construction with corresponding enhancement in the Budget for Road Communication sector.

## **B. Waterways**

The Central ministry concerning inland waterways has already announced several projects for developing the system of inland waterways in North Eastern Region (NER). Some of the states like Assam have inland water transport directorate/authority functioning for a long time. They should now be able to improve some of the existing inland water transport system with fund from the Central Government. The projects announced by the central government will perhaps be executed by them. Therefore, the states concerned may improve and upgrade their existing system. For that purpose the states may examine if the following areas should be given particular importance.

- a) The existing ferry services should be expanded and improved keeping in view the increasing number of passengers and volume of goods ferried. Many steamers may need repairing and there may be need to increase the fleet strength of the steamers of different sizes. The states concerned may like to send information on the existing position of steamer/ferry services in the states for NEC's guidance as fund from the plan may be made available for improving ferry, steamer and cargo services.
- b) Increasing the ferry and cargo services from the areas where sufficient quantity of paddy, fruit, vegetable, jute, mustard etc. are grown on one side of the river to the main markets on the other bank of the river may be very beneficial to the farmers. This is possible if ferry services between north and south bank of the river Brahmaputra is increased. This will allow easier and cheaper transport of agricultural produce to big marketing centres like Goalpara, Palasbari, Guwahati, Nagaon, Jorhat and Dibrugarh etc. Goods by steamers can also be sent to places nearer to important consuming centres like Dimapur and Silchar using the rivers Dhanshiri and Barak respectively.
- c) Facilities for quick repairing of steamers and boats need to be set up at different important river ports. For that the states concerned may submit plan for training people for the job. During flood time a large number of wooden boats are required for rescue and relief operations. States concerned should have sufficient number

small and medium size wooden boats for this purpose. For this purpose if fund meant for disaster response is not sufficient, proposals may be submitted to NEC.

- d) During winter season ferries and cargo steamers carrying men and material getting stuck in the middle of river Brahmaputra is not an uncommon phenomenon. The states concerned need to do something about this. For smooth and obstruction free movement of steamers and big boats dredging in the selected spots may be necessary. For this a proper and scientific study is necessary which NEC may consider funding.
- e) A detailed study may also be funded to ascertain which authorities, agencies and traders would like to bring what volume of which goods annually to NE region through Bangladesh using the Brahmaputra river.

### **C. Airports and Air Connectivity**

Due to difficult and hilly terrain in almost two thirds of the NE Region and inadequacy of road and rail communication there is need for more airports and air services especially using small aircrafts carrying 30-40 passengers in the region. By using the existing airports at Guwahati, Silchar, Agartala, Imphal and Dimapur there also should be regular services to places like Dhubri, Bongaigaon, Siliguri, Gangtok, Tura, Tezpur, Dibrugarh, Jorhat, Aizawl, Itanagar and Diphu etc. This will make it easier for people travelling from Dhubri to Imphal and from Aizawl to Dibrugarh. Of course, even for flying small commercial aircraft within the NE region proper traffic survey has to be done for different routes to ensure that the occupancy ratio is sufficient to make flying such aircrafts economically viable.

To make the Act East Policy into a reality it is necessary the air services like the ones mentioned below are started for easy travel between the NE region and some of the South and South East Asian Countries :-

- Guwahati - Imphal - Yangon
- Guwahati - Mandalay - Kuming
- Guwahati - Yangon - Bangkok
- Imphal - Mandalay - Bangkok
- Guwahati - Shillong - Dhaka
- Agartala - Dhaka
- Kolkata - Guwahati - Kuming
- Agartala - Dimapur - Yangon
- Silchar - Imphal - Mandalay etc
- Kolkata - Dimapur - Bangkok

At present the total aircraft movement (commercial) in a year in the region is nearly sixty thousand. Number of passengers is almost fifteen lakhs. The volume of traffic is increasing. Therefore, there is sufficient reason for more investment in the sector by MOCA and DGAA. To increase, expand and improve air connectivity of the region with the rest of the Country

and some of South/South East Asian countries greater investment in this sector is an urgent necessity. As far as improved air connectivity with the South/South East Asian countries is concerned, Ministry of External Affairs should play the facilitating role.

North Eastern Council (NEC) has already given sufficient funds for expansion and improvement of airports like Guwahati, Umroi, Jorhat, Pakyong, Tezu and Lilabari etc. in this region. Moreover, NEC is also providing fund to Alliance Airlines for maintaining air services within the NE region as a measure of viability Gap Funding (VGF) – cost minus revenue. Therefore, within this plan it may be possible for NEC to provide some fund for the following:

- a) Improving some non-operational airports of the region. This will require traffic survey for which states concerned may submit proposal for providing some fund subject to the financial size of this plan.
- b) To make airports like Guwahati, Imphal, Silchar and Agartala hubs of air services there has to be sufficient facilities for repair and maintenance of aircrafts under this plan subject to availability of fund NEC may be able to provide some fund on receipt of suitable proposals from the authorities concerned.
- c) Though NEC funded for construction of hangers at Guwahati airports, aircrafts are not parked for the night in these hangers. The reason may be shortage of local technical personnel for carrying out minor and routine aircraft maintenance and repairing. States may, therefore, prepare proposal for training mechanical engineers (degree and diploma holder) for aircraft maintenance and repairing. For suitable proposals in this regard funding may be considered under this plan.
- d) To export high value fruits, flowers, spices, herbal plants, items of sericulture and handicrafts etc facilities for cargo handling have to be increased in the major airports of the NE region. For any study or survey in this regard fund from this plan can be made available subject to suitability of proposals and size of the plan fund.

## **IV - Power and Renewable Resources of Energy**

The North Eastern Region (NER) is presently getting power from hydel and thermal power generating stations located within and outside the region. There is no nuclear power plant in the region and power generated from the renewable energy sources like solar, wind and biomass, etc. is extremely negligible. The region has potential for developing more than 62,000MW of electricity from hydel sources. But till date only about 2,000 MW of that potential has been developed for generating power. Although hydel power projects of capacity 5,480 MW are now under construction, there will still be a potential of generating power of more than 55,000 MW for from hydel sources. Among the States in the region, Arunachal Pradesh has the maximum hydel potential of 50,064 MW to produce electricity.

### **1. Survey and Investigations for small hydel projects**

In this region most of the hydel power projects now in existence are under Central Public Sector. States have developed power projects only of 382 MW and projects of 40 MW are presently under development. Therefore, States of their own may also like to get involved in setting up of hydel power projects in suitable locations in the region, especially small projects of upto 25 MW capacity for which fund is also made available from the Ministry of New & Renewable Energy. During the implementation of this plan, North Eastern Council (NEC) may provide fund for speedy survey and investigations in suitable locations of the region for setting up such hydel power projects. States may, therefore, submit such proposals in their priority list to NEC for examination and funding.

### **2. Survey and Investigations for thermal power projects**

At present the region requires about 15,000 million units of power (2015-16) and 94% of that requirement is made available by buying power also from power stations of central generating stations within the region and from outside the region. The peak demand in October 2016 in the region was around 2847 MW and 2787 MW was made available. The deficit was only about 60MW. The present peak demand appears to be a suppressed demand as due to inadequacy of power, at times demands are not been submitted in many areas and by many individuals and business concerns, etc. If power can be made available to all round the clock, then the demand will automatically increase. During 2016-17 the peak demand is expected to be around 3,000 MW. With the completion of NTPC's thermal power station at Salakati, Assam, serious power shortage may not take place for next one or two years. But in order to reduce the dependency on central power generating stations and other sources outside the region, the States of the region, wherever possible, may take steps to set up both hydel and thermal power stations. As hydel power is often seasonal, to ensure full power supply throughout the year, it is necessary that the region should have more thermal power generating stations. The high sulphur coal in Assam, Meghalaya and Nagaland may perhaps be utilised mixing with coal from eastern India to produce power. The State Governments concerned may like to examine the matter and submit the proposals for survey, investigations, etc. to NEC for funding, as may be feasible under this

plan. The States may also take up the matter with big power producers like NTPC, NEEPCO, etc. about this.

### **3. Reduction in Aggregated Transmission and Commercial (ATC) loss**

The aggregated transmission and commercial (ATC) loss in the region for 2015-16 appears to be high at 23.46% compared to the All India average of 18.14%. Among the States in NER, the ATC loss is very high in Arunachal Pradesh (39.76%) and Nagaland (35%). In Assam, Meghalaya and Tripura it is around 20.69%, 23.15% and 23.21% respectively. Therefore, the States concerned may take necessary action for reducing the ATC loss and for that proposals may be submitted to NEC for consideration under the plan. Subject to availability of fund, NEC may like to fund such projects in the interest of the region. For reducing the ATC loss, States may like to complete 100% metering during the period within which this plan is expected to be implemented. It is necessary for the States to ensure that by 31.3.2020 the ATC loss is reduced to at least 15% in the region. States may also complete installation of pre-paid meters to reduce the ATC loss drastically. It is also necessary to ensure that low tension lines should not be very long say 10 Km. or more and the length of feeder lines should also be less than 2.5 Km or 3Km.

### **4. Enhancement of transmission and transformer capacity**

Compared to the peak demand, the transmission capacity in the region is still low and especially in the field of distribution. In order to transmit power which is expected to be generated by power generating stations now under construction, there should be adequate transmission capacity in the region. Therefore, the States may immediately identify the areas where transmission and transformer capacity, especially in the border areas, needs to be increased and accordingly they may submit schemes under this plan for funding. The proposals should preferably benefit more than one State.

### **5. Electrification of all the villages**

The per capita consumption of electricity in the NER is only about 300 units a year compared to about 1,000 units a year in the country as a whole. Electrification of all the villages within the region has to be completed without any further delay, so that every household can get electrical connection.

### **6. Maintenance and Repair of Transformers**

Under this plan fund may be made available to the States for taking steps to repair the transformers quickly by using trained manpower for the purpose. Whenever a transformer is damaged, it is seen that in many places several days or weeks are required to get that repaired. In order to reduce the time required for repairing damaged transformers, it is suggested that the State Electricity Boards/ Corporations may train their own technical staff to repair transformers in the electricity circle or Executive Engineer's jurisdiction locally. If any fund is required for setting up facilities to train manpower in repairing transformers, necessary proposals may also be considered by NEC under this plan, if the States do not



have sufficient fund for the purpose. The SEBs/ Corporations may also train suitable local youths for transformer repairing under the skill development programme implemented by the State Governments with their own and central funds.

#### **7. Dissemination regarding power saving measures**

In order to reduce the consumption of power, there should be increase in the number of super-efficient household appliances in the region. These appliances are like electric bulbs, air conditioners, refrigerators, etc. Electricity saved is electricity generated. Therefore, the State Electricity Boards and the States Directorate of Information & Public Relations may like to give wide publicity about use of power saving devices and super-efficient household appliances. Knowledge about solar power based energy efficient pumps for agriculture, etc. may also be disseminated among the public. The State Governments may also take steps for reducing energy consumption in their office buildings by at least five percent during the period of implementation of this plan. In order to reduce theft from electric lines by hooking, etc. wherever it is felt necessary, the States may go for underground cabling. For this purpose also proposals may be submitted to NEC for consideration, depending on availability of fund.

#### **8. Power for Agriculture sector**

It appears that use of electric power for agricultural purpose is very low in the NER compared to many other parts of the country. As the productivity and cropping intensity is low in the region compared to the rest of the country, it is extremely desirable that more and more power is used for agricultural purposes for producing more agricultural crops and to ensure that during the winter season land is not kept unutilised for want of water. For this purpose separate feeder line may be considered wherever necessary. Solar power pumps also may be installed in suitable areas, so that water can be pumped from rivers, streams and ponds to the fields used for growing crops. The States may consider forming water users' society for repairing and maintenance of small lift irrigation schemes using electric power or solar power. For this purpose also suitable schemes may be submitted to NEC for consideration and funding, depending on availability of fund.

#### **9. Promotion of Non-Conventional Energy**

The country has at present total solar electricity generation capacity of about 10,000 MW. Considering the population and geographical area of NE Region, NER should have by now been able to produce at least 300 MW of energy from solar power. But as this region remains covered by cloud for almost six to seven months a year, we should have been able to generate at least 140 MW or 150 MW of solar power by now. During the months from November to March there is sufficient scope for generating electricity from solar power, if plants of suitable sizes are installed on the top of buildings and in open areas. To begin with all the small, medium and big industries, government hospitals, water supply schemes, railways, defence installations and such other organizations should invest in generating electricity from solar energy. For this purpose good amount of subsidy is available from the

Ministry of New & Renewable Energy. This will reduce the pressure on the State Electricity Boards and once this becomes effective and popular, more and more people will come for this. With continuing research on increasing the efficiency of converters of solar energy into electric energy, it is expected that the price of solar plant is going to go down in coming years drastically. Therefore, at least for five months NER should be able to produce sufficient quantity of electricity from solar powers. For the people who work in the open as agricultural labourers, MGNREGA workers and workers in construction of buildings, etc., the State Governments may like to provide small solar cookers using which the workers can get their rice and dal cooked in the open using sun rays while they are working. This will also give some extra time for the aforesaid people to work more and get an opportunity to eat clean and readymade food. Besides, there are several de-centralized models for wind-solar hybrids which would also be looked into. This will be apart from focus on wind and solar stand alone technologies. NEC will also focus on skill development in various non-conventional sources of energy like Solar and Wind.

## **V - Irrigation, Flood Control & Watershed Management (IFC&WSM)**

The topographical and the geographical location of the North Eastern Region (NER) is unique in the sense that the hydro-meteorological situation has made it one of the highest rainfall zones in the world with an average annual rainfall of 2000 mm. This region also has a dense network of drainage channels with as many as seven (7) river basins being situated in this region itself. The region, as such, is very rich in water resources. But this has never before been tapped or utilized or conserved properly. As a result, the need for better and more irrigation facilities in the region is being felt increasingly. Water resources should be utilized and tapped properly for irrigation, generation of hydro power and watershed management. On the other hand, the adverse effects of torrential rains like erosion and flood should also be minimized, especially in this region which is regularly ravaged by the menaces of flood and erosion. Necessary infrastructural facilities in this regard also need to be created by the State Governments in the region. Capacity building is also required in this field for efficient and effective water management programmes in this region. The NEC makes its own contributions in this important field by providing financial resources and gives priority to inter State projects subject to, of course, within its overall budget constraint. Under the IFC & WSM sector of the NEC, the following schemes may be submitted by various NE State Governments and the Central Government organizations during the Plan period.

### **I. Scheme for implementation of Anti-Erosion, Flood Control and River Management and Water related Schemes:**

The main objectives is to prevent any Flood hazards, Land erosion and damage to livestock and livelihood including private and Public Properties of the People living within the critical Flood prone Plain Areas. The NE Region has as many as seven river basins. A number of damages due to bank erosion of rivers along its course are frequent. Discharge of the same river varies across the year between wide limits. During the monsoon seasons, the discharge is very large, whereas in other seasons, the discharge is relatively small. The erosion at the banks is causing threat to the lives and properties of the people above and around the bank. By providing walls along the banks deflector, bank revetment, pro-siltation device, land reclamation device, land stabilization and storm water drainage, etc., the erosion may be checked. Proposals submitted to the NEC for funding under the instant scheme must be as per CWC Guidelines, and the concerned State Government should give the detailed history of the problem justifying the proposal.

### **II. Scheme on implementation of Survey & Investigation of Power projects**

The main objectives of these schemes are to facilitate the State Govt. / Central Sector in preparation of DPR for the medium and large hydro projects for speedy development of the Hydro Power Sector in the region in near future. Since the NER is located in Zone-V, highly Earthquake prone Zone and progress of some major Hydro Electric Projects has suffered due objections by the people of the region. Therefore, emphasis should be assigned to construct

low height Dams with highly efficient low head Turbines, which can be viable alternative solution for all the major rivers and streams for power generation in NER.

### **III. Water Supply related schemes in hilly areas**

Due to jhum cultivation and large scale deforestation in the Region, the environment of the region has been badly affected especially in hilly areas. This has affected the rainfall pattern of the region and caused drying up of many natural water sources in the hills resulting in water scarcity in the hilltop villages. To address this issue, states may identify areas of water scarcity, especially in the villages located in the hilltops and formulate schemes for augmenting water supply by means of rainwater harvesting initiatives, improving storage in natural water bodies and implementing piped water supply to bring water from lower reaches, etc for funding by NEC.

### **IV. Implementation of all types of minor/micro Irrigation Schemes:**

The main objectives of the schemes are to achieve increase in food production in the Region by expansion of agriculture activities by providing irrigation facilities to the farmers of the States in NER. Population growth has led to the increase in demand for food grain production in the Region. To attain self sufficiency in food production, providing irrigation projects to bring more land under irrigated command area must be priority. Providing of proper irrigation facilities seems to be the only option to boost the food production. There is huge untapped water resource potential in the Region. Schemes can be proposed by the states in the following areas for funding by NEC:

- Drip and Sprinkler irrigation projects which should be encouraged to achieve optimum use of water.
- Creation of training facilities in each State capital of NER for supplying trained and skilled people proper for maintenance of lift irrigation systems.
- Promotion of Participatory Irrigation Management (PIM) through creation and activation of Water Users' Associations (WUA) which are supposed to look after the maintenance of the watercourses and corresponding outlets, maintain equity in irrigation water distribution, provide technical support and knowhow to its members and make necessary arrangements to provide all agricultural inputs to the corresponding crop fields.

### **V. Implementation of Watershed Management Schemes:**

Although the entire NE Region receives sufficient rainfall during the monsoon season, shortage of water has been seen during the winter in some hill States, more specifically in Meghalaya, Mizoram, Nagaland, and some parts of Tripura and Manipur. People residing in many villages of the hill States have to fetch their drinking water from distant places with great hardship. Therefore, the rain water harvesting technique may prove to be very much useful, especially if carried out in the areas marked with water shortage. Suitable schemes in the following areas can be framed by the states and submitted to NEC for funding:-

- Creation of multi – purpose water retaining structures to mitigate drinking water problems and irrigation problems in region especially in dry and winter months
- Re-charging ground water in the catchment areas by planting trees on the hill slopes
- Reclamation of natural and manmade lakes and ponds etc for development of agricultural fields, Horticultural gardens, fisheries, livestock activities
- Educating the community on water harvesting and incentivizing and encouraging community efforts and community participation in water harvesting projects Scheme for Implementation of Water Harvesting (for drinking water purpose).

## VI – Industries & Banking

### A. Industries

An important aim of the NER Vision 2020 is to achieve a high level of human development. Raising the quality of education and health is as much a goal in itself as it is a means to enrich the quality of life for people, and expand their choices in life. An important aspect of human development is that of building capacities of the population, through raising the quality of, and access to, health and education. A development strategy based on the resources of the region will occur simultaneously with the emergence of a group of strong, indigenous entrepreneurs, which, in turn, shall call for enhancement in the skill levels of the region. Capacity development is as important for marketing private institutions as it is for Government institutions. Most of the economic activities in the region are Government-dependent and, as very high proportions of the resources of the States in the region come from central assistance, development has remained dependent on the fund made available by the Central Government. The promotion of markets and institutions to disseminate information on prices of products is extremely important. Small industries dominate the industrial scenario in the NER and, so, special efforts need to be made for their expansion and growth. Thus, capacity building occupies a strategic position for the overall development of the region and, hence, the NEC proposes to support the task for the benefit of the region.

Areas relating to banking, industrial development, handicrafts, handicrafts and textiles in the NER where NEC support can be sought are:-

1. Setting up of a regional level bamboo development body in the shape of **North East Regional Bamboo Development Council (NERBDC)** will be taken up by NEC with the Ministry of DoNER, Min. of Environment, Forest and Climate Change, Min. of Agriculture etc. The Council will be responsible for:
  - Promotion of plantation of bamboo in mission mode by the States of NER, keeping in mind that May – August is the main season for bamboo plantation. For large scale plantation, suitable Chinese variety could be considered.
  - Encouraging setting up of Bamboo chipping and bamboo pulp industries for supply to paper mills.
  - Revival of the Tuli Paper Mills project.
  - Replicating the success story of Tripura regarding the effective utilization of bamboo and the cluster based approach for making of bamboo based products in other states.
  - Setting up branches of the Cane and Bamboo Technology Centre and Bamboo Resource Centres in other states
  - Setting up R&D Centres for bamboo development in collaboration with IIT Guwahati and NEIST Jorhat.
  - Setting up Skill Centres and Incubation Centres for bamboo products in the NE states.

2. Setting up of industrial sheds in industrial estates in the States of NER to enable local entrepreneurs to set up industries.
3. For promotion of handlooms and textiles in the NER, Govt. of India has a scheme titled North East Region Textile Promotion Scheme (NERTPS). It was pointed out that raw material is a problem for this sector. Yarn Bank proposals could be supported by the NEC.
4. Use of water hyacinth for Development of handicraft items and for production of bio-fertilizers.
5. Promotion of traditional products of the North East through support for design development, equipment and raw material bank. Examples of such products could be (a) Kauna products of Manipur, (b) Bell-metal industry of Sarthebari and (c) Brass industry of Hajo
6. Capacity building programs with focus on development of entrepreneurship. IIE can also be roped in for the purpose.
7. Setting up of Incubation Centres for promoting Start-ups in the Region.
8. Promotion of downstream industries of the Brahmaputra Cracker and Polymer Limited especially candle making units in the all the NER States.
9. Funding for study on setting up of industries in the region in particular like glass, granite, black pottery, bone china etc utilizing locally available raw materials.
10. Conducting Feasibility studies for setting up of Pharmaceutical industries, Railway coach making factory, Ayurvedic drugs making units, Rubber based industries etc. in the region.
11. All States of NER should have monitoring units for proper implementation of projects.
12. Ministry of Micro, Small and Medium Enterprises (MSME), Government of India has various schemes for cluster development, capacity development programmes for enhancing managerial capabilities, improvement of industrial design, etc. If the State Government feels supplementary assistance is required in availing benefits from these schemes, they may approach NEC.

## **B. Banking**

NEC support either in terms of funding or advocacy can be availed of in the following areas:

1. Banks to be encouraged and supported for opening of Bank Branches in every block of the NER. In this context, size of business and security concerns of Banks were discussed. It was emphasized that Business Correspondents Model should be encouraged.
2. All single officer Branches should be converted to at least two officer Branches. This would enable officers to visit the field for verification of loan applications etc.
3. All branches should have Single Window Clearance systems for sanctioning loans.
4. Every branch should have a microfinance section/division to enable financial inclusion.

5. Orientation programme for SHGs to be conducted. NERCORMP could be involved in such programs.
6. Loans under Credit Guarantee Scheme under Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE) to be encouraged by banks.

**C. Urban Affairs**

Due to rapid growth of secondary and tertiary sector in the economy, across the country including the North Eastern Region, urbanization is growing at a very fast rate. As per 1901 census, the urbanization rate in India was 11.40% only which rose to 28.53% in 2001 and is currently standing at 31.16% as per 2011 census. The World Population Report 2007 projected that by 2030 India's rate of urbanization will shoot up to 40.76%. So in future, development projects for the urban area will demand more resources. NEC could study the effects of rapid urbanization in the North Eastern Region and develop innovative projects for the urban areas. Presently, NEC could carve out a new cell within the Industries Sector to deal with the projects related to the welfare of the urban population. Projects may deal with the problems like traffic congestion, air pollution and problems of slum areas.



## VII - Tourism

*“All the states of the North East region are blessed with natural scenic beauty, distinct historical cultural and ethnic heritage. All this offers tremendous scope for tourism in the region. There is also a great scope for mountaineering, trekking and adventure tourism in the region. If developed and promoted well, this can emerge as the biggest employer in the region. It can also add to the growth and income of the region.”* - Prime Minister Shri Narendra Modi while addressing the 65<sup>th</sup> Plenary of the NEC on 27.05.2016

The Tourism Sector can be the engine of economic growth for the entire North East Region given the fact that this region has a tremendous potential for both employment generation and revenue generation by way of proper harnessing of its tourism potential. If there is a proper planning with due nurturing and investment support, this sector alone can stimulate the economy of the region to a higher growth trajectory. NEC would like to support upscaling the quality of tourism related services and proper branding of the Tourism industry in the Region. Areas where NEC support can be harnessed are:

1. The proposed North East Tourism Development Council (NETDC) which was approved in the 65th NEC Plenary would be incorporated as a Section 8 Company of the Companies Act 2013 (Section 25 of the Companies Act 1956) and appropriate budget head and provisions are being made in RE 2016-17. The functions of the NETDC are envisaged to identify and promote regional and international circuits, policy making at regional level, analysis of tourism infrastructure gaps, and tourism product identification. NETDC will work as a nodal agency for coordination with the Ministry of Tourism, Ministry of DoNER, Central Ministries, Tourism departments of the States, arrangement of funds for projects at regional level and other developing issues for promotion of tourism in the North East of India.
2. Implementation of the recommendations of the Integrated Tourism Master Plan for NER (TMP) would be taken up in consultation with the Tour Operators/Hoteliers and other stakeholders of the region. It may be noted that 11 regional circuits were finalized in consultation with tour operators and marketed during the WTM 2016 held at London.
3. Other tourist circuits would be identified by the Tour operators and supported by NEC.
4. The integrated North East India Tourism Website [www.netourism.gov.in](http://www.netourism.gov.in) being developed by NEC had passed security audit of National Informatics Centre (NIC). NIC is in the process of hosting the website in their server.
5. Proposals for Wayside Amenities in Tourist circuits would be supported in NE States as part of the Swachh Bharat Mission.
6. NEC will undertake tourism promotion campaigns in travel, airline and other important magazines, TV campaigns, advertisement hoardings at Airports/Railway platforms/Bus Queue Shelters at important and strategic locations in the metro cities

and other potential cities. Printing of brochures/literatures, promotion of festivals for promotion of tourism etc. will also be taken up.

7. The Institute of Hotel Management at Dimapur will be made functional.
8. Home Stays and Bed & Breakfast Projects will be supported.
9. The projects taken up by the Ministry of Tourism under its erstwhile Project/ Infrastructure Development for Destination and Circuits (PIDDC) scheme could be supported for completion and operation by NEC in consultation with the Ministry of DoNER and Ministry of Tourism.
10. A pool of Trained human resources in the field of tourism need to be built up which could be engaged in providing services directly to the stakeholders or involved in basic skill up-gradation for existing services providers, programmes for training of trainers, programmes as regards the tourism benefits/knowledge of the rural areas, etc. NEC support in this area would play a significant role in promoting tourism in the region. Training courses for hoteliers, airhostesses, tourist guides, etc., could also be supported under the instant scheme.

**PART III**  
**Other Sectors**

## **VIII - Agriculture & Allied Sectors and Horticulture:**

Agriculture plays a vital role in India's economy. Over 58 per cent of the rural households depend on agriculture as their principal means of livelihood. Agriculture, along with fisheries and forestry, is one of the largest contributors to the Gross Domestic Product (GDP). As per estimates by the Central Statistics Office (CSO), the share of agriculture and allied sectors (including agriculture, livestock, forestry and fishery) was 15.35 per cent of the Gross Value Added (GVA) during 2015-16 at 2011-12 prices. India is the largest producer, consumer and exporter of spices and spice products. India's fruit production has grown faster than vegetables, making it the second largest fruit producer in the world. India's horticulture output, comprising fruits, vegetables and spices, is estimated to be 283.4 million tonnes (MT) in 2015-16 after the third advanced estimate. It ranks third in farm and agriculture outputs. Agricultural export constitutes 10 per cent of the country's exports and is the fourth-largest principal exported commodity. The agro industry in India is divided into several sub segments such as canned, dairy, processed, frozen food to fisheries, meat, poultry, and food grains.

For development of North Eastern Region and to bring it at par with the rest of the country, maximum emphasis needs to be given to Agriculture & Allied Sectors. Though presently approaching the end of the Twelfth Five Year Plan, the region is still not at par with the rest of the country in agricultural productivity, cropping intensity, irrigation coverage, application of fertilizer and pesticides, credit flow, organized marketing facilities, construction of adequate number of godowns and warehouses, crop insurance and production of large quantities of value added products etc. Moreover, the position relating to processing of various agricultural crops to add value is also not satisfactory. Therefore, this plan seeks to provide maximum fund for all round development and modernisation of agriculture in the region. Several sub-sectors are briefly mentioned below for which the States may consider submitting proposals to be funded under this plan. If any State is already having sufficient infrastructure and effective machinery for developing any sub-sector, the States concerned may consider expansion and improvement of such institutions to help other States for which proposals would be welcome for funding.

### **1. Schools for Surveyors:**

In many parts of the region the land is owned by the community or clan. Due to this fact, individual allotment or settlement for a long period of say 30 to 40 years is not feasible in those areas. Land records, which also are not often based on cadastral survey do not show which part of land belongs to whom. It is difficult, therefore, for the farmers and owners to claim that they have the title over particular plots of land.

Hence, it is considered necessary that States where land has not been surveyed fully may go for cadastral survey of land and consequent preparation of land records on the basis of parameters such as long occupation and ownership, which may be decided by the states. There may be two types of records, one showing the occupation of land and the other

showing the ownership rights. The States which do not have their own survey school may think of setting up such schools so that trained recorders will be able to carry out surveys of land and prepare land records. NEC would consider supporting setting up of such schools.

As the government may not be the owner of land in many States and the ownership vests on the community, the State Governments concerned may like to formulate necessary laws making the community/clan the custodian of land held jointly by the people, so that the community or the clan can legally certify ownership of particular plot of land to individuals. This will allow the farming community and others to obtain bank loan by mortgaging such lands, as lack of sufficient fund for investment in agricultural activities is one of the main reasons for backwardness of agriculture sector in N.E. Region.

## **2. Setting up a Seeds Corporation in the NE Region:**

One of the main reasons for low productivity in agriculture in N.E. Region is inadequate availability of good quality certified seeds. It is said that if good quality and certified seeds are used, there is about 30% increase in yield even if no extra amount of fertilizer is used. Therefore, it is very essential in the N.E. Region for increasing the production of agricultural crops, to set up facilities for producing good quality seeds and giving those to the farmers in time. For that purpose the NEC could consider setting up a Seed Corporation in the name of North Eastern Seed Corporation with equity and technical participation from the National Seed Corporation. For that purpose States have already been requested to let NEC know if land can be provided free of cost for production of certified seeds for the farmers of NE Region. Once the decision is taken to set up the corporation, the production of seeds of paddy, pulses and oil seeds would be taken up first, as these are some of the major crops of the region. The States of N.E. Region may also consider whether by the end of March 2020, they would like to ban the sale of uncertified seeds within their States.

## **3. Prevention of erosion & reclamation of land:**

In N.E. Region land-man ratio is very unfavourable because only about 30% - 35% of the land is plain land where cultivation is easy. The remaining part being hilly and is difficult for cultivation for various reasons. The per capita availability of land in the region is only about half hectare. In the valley areas of the region the population density is almost 450 per sq.km. The average size of land holding is only one hectare. With such small land holdings coupled with low productivity, low cropping intensity, low application of fertilizers, inadequate irrigation facilities, etc. the peasants of the region are slowly getting marginalised and pauperized. In addition to this, every year vast areas in the region are either eroded by the rivers or land is lost due to landslides. In the hilly region valuable subsoil is lost due to heavy rain, because of inadequate forest cover over many areas. While nature takes about 300 years to form only 1 cm of topsoil, soil degradation in India is estimated to be occurring on 147 million hectares (Mha) of land, including 94 Mha from water erosion. Therefore, it is necessary for the States to design suitable schemes to

prevent erosion of land and for reclamation of the lost land which may be submitted to NEC for funding.

#### **4. Access to subsidised Fertilizers:**

Compared to the rest of the country the application of fertilizer is low in the region as except urea most of the chemical fertilizers are brought from outside the States. Government of India is allotting huge quantities of subsidised fertilizers every year for distribution among the farmers. In order to ensure that these subsidised fertilizers reach the farmers in time at government prescribed price and in full quantity, the mechanism to supervise and monitor the arrival and distribution of these fertilizers need to be strengthened for which some fund from this plan can be made available.

#### **5. Farm Mechanisation:**

In respect of mechanisation of agricultural fields in the region, it is to be admitted that agriculture has still not become modern in this region. Of course, in hilly region there may be difficulties in using machines for the purpose of agriculture. However, wherever possible in the region efforts should be made to use machines like tractors, power tillers, harvesters and sprayers, etc. NEC could consider working with Institutions like the ICAR and North Eastern Region Farm Machinery Training & Testing Institute, Bishwanath Chariali, Assam for scaling up the usage of farm machinery in the agriculture sector. For this purpose training may be given to some departmental staff and unemployed youths for repairing of agricultural machines and implements. Funds under this plan may be made available for training and repairing of aforesaid machines and upgrading the skills of farmers in using machines and other implements in agriculture.

#### **6. Consolidation of land holdings:**

For use of machines in agriculture it is often necessary that the fields should be big for optimum utilization of these machines. As the average size of land holdings in the region is small, the States may attempt to consolidate the land holdings, so that machines can be used in large areas if farmers can pool their land together for agricultural activities. To begin with at least some pilot feasibility study may perhaps be undertaken by the States concerned with help from NEC.

#### **7. Irrigation projects:**

Compared to the All India average, the percentage of net irrigated area to net cultivated area is very low in the North Eastern Region. According to the position in 2010-11, the percentage of net irrigated areas to net cultivated areas of the States of NER is as shown below:-

<b>State</b>	<b>Percentage:</b>
Arunachal Pradesh-	26
Assam	6
Manipur	21

Meghalaya	22
Mizoram	9
Nagaland	23
Sikkim	18
Tripura	23
<b>(All India)</b>	<b>45</b>

Of course, during the last six years the percentage might have improved to some extent. As timely irrigation is a major factor for increasing the agricultural production, the States may like to create irrigation facilities wherever possible in the form of lift irrigation, flow irrigation, sprinkler irrigation and shallow tube wells, etc. If States which have comparatively very low rainfall like Rajasthan, Maharashtra, Gujarat, Madhya Pradesh and Haryana can produce so much of wheat, rice, oilseeds, sugarcane and pulses, there is no reason why NE States should not be able to produce these crops if during winter sufficient irrigation facilities are provided to the farmers. NEC could support suitable irrigation schemes if submitted by the State Governments.

#### **8. Farm Credit accessibility:**

Modern agriculture needs sufficient investment in the form of mechanisation, good seeds, fertilizers, pesticides, storage and marketing facilities, etc. For that the farmers have to avail loan from banks. In the NE Region the credit deposit ratio is still around 40% when it is more than 100% in states like Andhra Pradesh, Tamil Nadu and Delhi. Therefore, action has to be taken to make the bank credit accessible to the farmers and for that the State Governments should have mechanisms to constantly monitor receipt of applications from farmers in the banks and sanctioning of loan. To set up such mechanism or to strengthen already existing mechanism, NEC can provide some fund if proposals are received.

#### **9. Setting up of regulated Markets for agricultural produce:**

In order to promote development of a common national market for agricultural commodities through e-platforms, the GOI has approved Rs 200 crore for a central-sector scheme for Promotion of National Agricultural Market through Agri-Tech Infrastructure Fund (ATIF) to be implemented during 2014-15 to 2016-17. Under the scheme, it is proposed to utilize the ATIF for migrating towards a national market through implementation of a common e- platform for agri-marketing across all states. NE governments may like to pursue implementation of this scheme in their states to benefit their farmers.

Further, to ensure that farmers get sufficient remuneration for their crops, setting up of regulated markets with sufficient storage capacities, bank counters, IT and e-commerce infrastructure for linking to prospective buyers and for getting real-time information on prevailing prices are necessary. States may chalk out plans for setting up of such markets for which NEC may be approached for support.

## **10. Processing of Agricultural Commodities:**

Investment in processing and marketing of agricultural products will make big difference in value addition and will have the potential to realize better value for the products. Introduction of solar dehydrators for agricultural produce would be very useful for better shelf life of the produce.

## **11. Agriculture Extension Services:**

According to the Economic Survey (2014-15) the NSSO 70th round survey indicates that about 59 per cent of farmers do not get much technical assistance and know-how from government-funded farm research institutes or extension services. So they have to rely on progressive farmers, media, and private commercial agents such as dealers of farm inputs like seeds, fertilizers, and pesticides for technical information.

Much development has taken place in agricultural science today. Indian Council of Agricultural Research (ICAR) and the agricultural universities throughout the country are constantly producing new varieties of seeds, plant materials and new methods of cultivation. The benefits of agricultural research will actually reach the farmers only if information about these new seeds, techniques, etc. is made available to the farmers in the field without any delay. For this purpose, the role of Agricultural Extension services is extremely important to provide farmers a direct interface with agricultural experts. Continuous training and meeting of farmers by Agricultural Extension Officers and village level workers is very essential. It is also necessary to monitor the activities and functioning of the agriculture extension service personnel. The States may like to create suitable mechanism for dissemination of desired information and providing assistance to farmers.

## **12. Roads & Bridges in agricultural areas:**

Wherever marketable surplus crops are produced, it should be ensured that the roads & bridges to the nearest market are always in good condition throughout the year. Under schemes like PMGSY every village is now connected with the main road. But in many places in the NE Region, the semi-permanent timber bridges are not in good shape to allow trucks and light commercial vehicles to ply carrying agricultural produce. Wherever such situation exists, farmers do not get incentive to produce more. Therefore, all semi-permanent timber bridges are to be either made RCC bridges or strengthened so that trucks carrying at least nine to ten tonnes can use these bridges.

## **13. Crop insurance:**

In the NE Region due to flood, erosion, cyclone, hailstorm and pest attack standing crops often get damaged in some areas causing great loss to the farmers. To reduce the loss to farmers, it is absolutely essential that all farmers should insure their crops which can be done at a very low premium now-a-days. The facilities of the Central Government Crop Insurance Schemes also can be availed of by the farmers. In order to provide insurance cover to all the farmers, the States may set up a cell in the Agriculture



Department/Directorate to monitor and help the process of insuring crops throughout the States. To set up such monitoring cell, NEC would like to consider proposal if received from the States.

#### **14. Promoting Organic farming:**

The NE Region can be a hub for organic products as it is said to be naturally organic by default, for traditionally low or non-application of chemical fertilizers and pesticides, etc. Realizing the potential of organic farming in the North Eastern Region of the country Ministry of Agriculture and Farmers welfare has launched a Central Sector Scheme entitled **“Mission Organic Value Chain Development for North Eastern Region”** for implementation in the States of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura during the 12th plan period. The scheme aims at development of certified organic production in a value chain mode to link growers with consumers and to support the development of entire value chain starting from inputs, seeds, certification, to the creation of facilities for collection, aggregation, processing marketing and brand building initiative. States may take advantage of the scheme and promote organic farming in the NE Region.

There is lack of information in the field about the process for organic certification among the farmers. The States’ Agriculture Extension Wing may need to be strengthened in order to open better channels of communication with the farmers. States may submit proposals regarding this.

#### **15. Setting up of Bio-fertilizer units:**

As there is presently a great emphasis on bio-fertilizers, the States may like to set up large number of units for producing bio-fertilizers by training local youths for the purpose. It is seen that in places where water hyacinth is abundant, the plant can be used for producing good quality bio-fertilizers. Here also the Extension Wing of the Agriculture Department may play very important role in making the farmers to produce bio-fertilizers locally. Support for this initiative may be sought form NEC.

#### **16. Increasing production of sugarcane & maize and revival of sugar mills:**

As NE Region is a high rainfall area and even after the harvesting of kharif crops, sufficient moisture remains in the soil, crops like oilseeds, pulses, potato, etc. can easily be grown. Therefore, in addition to these crops considering the high water availability in the region, cultivation of sugarcane and maize also can be taken up in large scale. For keeping pulses, sugar and oilseeds no cold storage is necessary. Moreover, sugar, if produced locally in NE Region, can also be exported outside the region. For that purpose the non-functional sugar mills in the region may be revived by the States concerned with the objective of increasing production of sugarcane and for that purpose suitable proposal may be sent to NEC, if States own fund is not sufficient for the purpose. The yield per hectare for maize is low in the North East. It is lowest in Assam at 898 kg/ha compared to the national average of 2676 kg/ha and the highest yield in Tamil Nadu of 5372 kg/ha. Schemes for increasing the yield of maize

may be formulated and submitted to NEC for funding. Increased production of maize will also help in development of piggery business in the region.

#### **17. Animal husbandry & Dairy development:**

The population of NE Region is about 47 million. Almost four-fifth of people living here are non-vegetarian. Therefore, there is great demand for fish, egg and meat. In addition to that there is great demand for milk.

Compared to the country as a whole, the production of milk in the NE Region is very low. Therefore, all endeavours have to be made for developing the dairy sector, if necessary by constituting Dairy Cooperative Societies. During the year 2015-16, the country has produced about 160 million tonnes of milk. By that standard if population of NE Region is taken as 3.5% of country's population, NE Region should have produced at least 5 million tonnes of milk in that particular year. Dairies can provide means of livelihood to a large number of farmers and in dairy business. It is also seen that about 80% of the workers involved are women. Therefore, dairy development would also improve the financial condition of women.

In North Eastern Region the demand for pork is to the tune of three lakh tonnes, while local production is only around 1.7 lakh tonnes. The remaining quantity amounting to 1.3 lakh tonnes is brought from outside the Region. There is thus potential for pig rearers to be able to earn Rs. 2,000 crore per year as additional income. Same is the case with production of fish, mutton, milk, chicken and duck meat. State Governments may like to design suitable schemes and submit to NEC for development of dairy, piggery, poultry, fishery, etc. and for that purpose they may also take the technical guidance from ICAR, agricultural universities and other such research institutions.

The North Eastern Region has also great potential for bee keeping and mushroom production, for which training is required outside the region. If the States so desire, some fund can be made available for the purpose from this plan.

#### **18. Institute for development of Horticulture & Floriculture:**

Due to the nature of the soil, NE Region produces huge quantities of vegetables and fruits like orange, banana, jackfruit, pineapple, lemon and other crops like chilli, ginger, turmeric, mushroom, passion fruit, kiwi (Arunachal Pradesh), large cardamom (Sikkim) and various types of flowers and spices, etc. Production of these crops is economically very beneficial. For systematic development of horticulture in the region, it is felt that the Central Institute of Horticulture, Dimapur may be strengthened to provide technical support to all the NE states. For development of floriculture, a Floriculture Institute should be set up in the NE Region. This will impart training in planting, selecting, packing, marketing and other aspects of business of floriculture. The institute may offer both diploma course and short term courses.

### **19. Post harvest management and value addition**

A Government of India study done in March 2015 on “Assessment of Quantitative Harvest and Post-Harvest Losses of Major Crops and Commodities in India” by ICAR - Central Institute of Post-Harvest Engineering and Technology (CIPHET), Ludhiana, estimated that annual value of harvest and post-harvest losses of major agricultural produces at national level was of the order of Rs. 92,651 crore calculated using production data of 2012-13 at 2014 wholesale prices. In order to arrest post harvest losses of horticulture & non-horticulture produce and to provide integrated cold chain and preservation infrastructure facilities from the farm gate to the consumer or from the production site to the market, Ministry of Food Processing Industries is implementing the Central Sector Scheme of Cold Chain, Value Addition and Preservation Infrastructure since 2008-09. However, though India has got the largest cold storage capacity of 32 million tonnes in the world, the cold storage capacity in the NE Region even today is very negligible. Therefore, with the help of Government of India’s Department of Food Processing, the States may design suitable schemes for processing, value addition, low cost scientific storage, packaging, etc. to prevent wastage and ensure remunerative price to the farmers.

### **20. General factors which need to be considered seriously:**

As the Prime Minister of the country has announced that farmers’ income has to be doubled by 2022, the States of NE Region also have to identify immediately the challenges faced by the farmers in the region.

- Soil is an integral part of human and animal health. Soil health, defined as the capacity to function within ecosystem and land use boundaries to sustain biological productivity, maintains environmental quality and promotes plant and animal health. Intensive agriculture - without realizing the necessity of soil testing - is leading to a widespread deficiency of micronutrients, such as deficiency of zinc, iron, manganese and boron, and needs to be addressed at the earliest. Therefore, in order to increase agricultural production in the Region, it is very essential that soil testing is done regularly and farmers are given soil health cards individually. Follow-up recommendations also need to be given to the farmers for increasing the production of different types of crops. From the experience of Madhya Pradesh, it is seen that after soil testing and follow up of the recommendations given, the production of wheat and potato in many areas have increased by 20% and 40% respectively.
- State Marketing Board’s regulations may be reviewed and updated for the benefit of farmers of the states. Though the process of market reforms has been initiated by few states by the amendment of their respective APMC Acts on the lines of the Model Act circulated during 2003, some of them are yet to adopt all the provisions of the Model Act uniformly, and some are yet to adopt the same. GOI has been actively pursuing with the states that have adopted reforms to notify the rules there under to implement the provisions so that actual progress can be achieved on the ground.

- The States are now implementing various flagship schemes in agriculture like Pradhan Mantri Krishi Sichi Yojana, Pradhan Mantri Fasal Bima Yojana and E-mandi scheme etc. States may keep NEC informed of progress of these schemes and identify gaps for providing gap funding or for taking up the matter with the concerned Ministry in the Government of India.
- Agricultural growth depends on availability and use of high-quality seeds of high-yielding varieties; fertilizers; irrigation; pesticides; farm machinery and equipment; and agricultural credit. States should take action to reduce input costs so that farmers can get better returns.
- As in many areas of NEER jhum cultivation cannot be avoided due to various reasons, NEC shall promote cultivation of other crops like ginger, papaya, maize, and high value products like stevia, lemon grass, kiwi, dragon fruit, arecanut, black pepper, coffee, tea, Lakadong turmeric, chestnut, cherry, cashew nut, jack fruit, guava, pineapple, walnut, strawberry, etc. NEC shall also promote floriculture, large cardamom cultivation, and also sericulture and handicrafts, etc.

## IX - Health, Family Welfare & Medical Education

After security to life and property, the most important basic human needs for the citizens of any civilized society are Food & nutrition, Water & sanitation, Housing, Health Care Facilities, and Education. The North Eastern Region, because of its geographical location, difficult terrain, high rainfall, vast hilly region, large forest areas and large number of ethnic groups, is not a very homogenous territory for easily providing normal health care services round the clock to all the 47 million people of the region. Moreover, due to inadequate communication facilities throughout the region, health care services have not yet become available to everyone as can normally be expected. The Government of India, in its Annual Report (2015-16) has identified the following problems in the Health Sector in the North Eastern States:-

- *Shortage of trained manpower*
- *Providing access to sparsely populated, remote, far flung areas*
- *Improvement of Governance in the Health sector*
- *Need for improved quality of health services rendered*
- *Making effective and full utilization of existing facilities*
- *Effective and timely utilization of financial resources available*
- *Morbidity and mortality due to malaria*
- *High level of tobacco consumption and the associated high risk to cancer and*
- *High incidence of HIV/AIDS in Nagaland, Manipur and the increasing incidence in Mizoram and Meghalaya.*

Though in the last few decades large scale development in the health care services and medical education has taken place, still a lot needs to be done for ensuring good health care services to all the people of the region. Both the Central Government and the State Governments of NE Region are doing their best providing health professionals and equipment, training, etc. wherever necessary to improve the standard of health care services in the region. This plan, which is proposed to be implemented during the next three years or so, highlights certain areas where more can be done to improve the situation. Accordingly States may like to design suitable schemes and send those to the North Eastern Council (NEC) for funding, in case the fund received from the Government of India and the states' own fund is not sufficient.

1. To begin with, the States concerned may examine whether they can increase the allocation for health sector in their annual budgets in the next few years. World Bank data for 2014 indicates that India spends only 1.4% of its GDP on health (public expenditure) compared to other BRICS nations which spend 4.2% (South Africa), 3.8% (Brazil), 3.7% (Russia) and 3.1% (China) of their GDP on health. Among the NE states, the GOI Ministry of Health & Family Welfare statistics for 2013-14 show that Assam spent the highest (2.1%) on health, which is also above the national average, while the

other states' expenditure were well below 1% of GDP and ranged from 0.3% (Sikkim) to 0.6% (Meghalaya).

2. All the National Health Programmes like Malaria Eradication Programme, TB Control Programme, Blindness Control Programme, Leprosy Control Programme, Goitre Control Programme and Immunisation have to be given greater emphasis so that people do not lose their lives in diseases like Malaria, Dengue, Chickengunya and Japanese Encephalitis, etc.
  - In case of Malaria Eradication Programme, where financing is done by both the Centre and the States, fund from NEC can be availed to improve their infrastructure for malaria eradication in the form of sprayers and vehicles, etc. for increasing coverage of spraying of DDT, etc. and supervision and monitoring of the spraying programme from December to the month of May every year. Care has to be taken to reduce malaria in the inter-state border areas which are mostly forested. State Governments can, therefore, prepare suitable plans for completely eradicating malaria after studying the existing situation.
  - TB affects predominantly the poor and marginalized, perpetuating poverty through health and economic shocks to families least able to cope. GOI Ministry of Health & Family Welfare statistics indicate that nearly 100,000 cases of serious multidrug resistant TB (MDR-TB) are estimated to occur in the country every year, mostly attributable to prior inadequate treatment, and each MDR TB case costs more than Rs 1 lakh to diagnose and treat. It appears some people are still dying of TB in the region perhaps due to multi-drug resistant TB. After exhausting the resources available through the National TB Control Programme, States may approach for funding from NEC for controlling the disease.
  - Similarly serious attention needs to be given for Blindness Control Programme which can be particularly done by regular testing of eyesight of school children in the region and conducting programme of cataract operation regularly in rural and urban areas.
  - Programme relating to Control of Leprosy and Goitre also needs be implemented as per guidelines and States may like to submit suitable schemes for the purpose.
  - Regular check up of school children by qualified doctors should be must and health cards should be maintained by the school for every student during their school years. States may approach NEC for logistical support to implement this programme. Involvement of 'not for profit' organisations in this area may also be encouraged.
3. The existing infectious diseases hospitals in the region should be revived and modernised, so that greater number of patients suffering from infectious diseases of the region can be kept in these hospitals. Mention may be made about the existing infectious disease hospital in Kalapahar, Guwahati which needs urgent upgradation.
4. There are norms for setting up of sub centres, public health centres, community health centres, hundred bedded hospitals and two hundred bedded hospitals for

prescribed number of populations. If any State is not having adequate number of such health institutions, steps may be taken for setting up of those hospitals. In all those hospitals and sub centres, it is necessary that there is water supply system and electricity. If fund received from the Centre and State is not sufficient to provide electricity and water supply to these health centres, proposals may be submitted to NEC for providing these facilities, beginning with sub centres in the most difficult, hilly and forest areas.

5. There is also an acute shortage of tertiary medical care centres in NER due to which there is a gross mismatch between expectation and satisfaction. Till now, the approach is a piece meal one and there is no such centre where everything is available under one roof. Private players may also be roped in for tertiary care. Good tertiary care centres are required in the NER to cut down the out of pocket expenditure on medical treatment incurred for taking out patients outside the region. An annual average of roughly around Rs. 120 crores go outside the NER for medical treatment purpose.
6. Hospitals which need blood bank but do not have one should be provided with blood bank facilities for which fund can be allotted from NEC. However, before sending proposals for blood banks to be funded by NEC, it should be ensured that there is sufficient number of haematologists and other required technical staff for manning the blood banks.
7. In many hospitals, it is seen that there is shortage of space for the attendants of patients and persons who accompany the patients to hospital for registration and examination by doctors. Therefore, it is felt necessary that suitable waiting sheds with chairs and drinking water facilities should be made available to such persons many of whom come from far-flung villages.
8. There are often reports that in some places of the region drugs of doubtful quality are sold especially in the rural and difficult areas. To stop this, drug testing laboratories in different places are necessary so that drugs suspected to be spurious can be tested and analysed urgently for taking necessary legal actions against the seller of such drugs. For that purpose, regional level drug testing laboratories may be set up.
9. To produce some common medicines like antibiotics, antipyretic, anti-malarial, anti-diarrheal, cough syrup, gauze bandage and dextrose solutions the Government of India's drug manufacturing units like Indian Drugs and Pharmaceuticals Ltd. and Hindustan Antibiotics Ltd. may be encouraged to set up drug producing units in some places of North Eastern Region. The interested States may provide land to these drug producers, and if necessary, fund for development of infrastructure may be sought from NEC.
10. In many health sub centres of the region, it appears ANMs are not posted and in many places the ANMs do not have any quarters to stay. ANMs are very important to strengthen the health care system at sub-centre level. Therefore, States may seek funds for this from Government of India for setting up ANM quarters and also submit

proposals to NEC for consideration. It may be ensured that where the sub centres are away from the main village or habitation, ANM's quarter should always be inside the village or habitation so that ANMs do not feel inconvenient to stay in a lonely place.

11. The State Governments may also like to ensure cent percent attendance of doctors and ANMs in primary health centres, community health centres and sub-divisional hospitals. If in rural areas rented accommodation is not available then at least for hilly and difficult areas proposals may be sent to NEC under this plan for setting up some quarters for the doctors and nurses posted in the aforesaid regions.
12. In all hospitals, where sufficient number of doctors and minimum facilities for delivery has been provided, institutional delivery should be done in those hospitals.
13. Cancer incidence is a very serious problem in the NE Region. The Dr. B. Booroah Cancer Institute at Guwahati gets more than ten thousand people registered annually as OPD patients. Early detection of cancer may lead to survival of the patients for a longer period. Therefore, the States may think of having mobile cancer detection units for doing x-ray, sputum testing, collection of blood samples and examination of throat, etc. in market places and other public places throughout the State. For this purpose, a suitably designed bus or a van on bus chassis can be fitted with x-ray machine, etc. This will help in early detection of cancer in many patients so that if necessary, they can go for regular treatment without any loss of time. For this suitably designed proposals may be sent to authorities concerned.
14. For the checking of teeth of school children, similar kind of mobile vehicle with dentist's chair and other equipments may be arranged. The vehicles will go from school to school throughout the region for the purpose. For this also suitable proposal may be sent to NEC.
15. The growing use of electronic, computer-controlled and networked equipment has created a demand for specialized, well trained graduates with a focus on the medical applications of electrical/electronic engineering technology. In the North Eastern Region most of the hospitals are now having x-ray machines, ultra sonography machines, CT scan, blood analyser, spectro- photometer and MRI/MRA, etc. However, technicians to maintain/ repair such machines are not easily available in the region. Therefore, NEC plans to support setting up of a school of medical technology in the region where four year degree course and three year diploma course could be run to create a technically qualified cadre to maintain all such machines. This will be a great help to all the States. The students passing out of these institutes may either be absorbed by governments for various districts or they can set up their own business ventures to maintain these machines in both government and private hospitals.
16. Regarding other non-communicable diseases like hypertension and diabetes and conditions of under nutrition, sufficient steps should be taken to disseminate knowledge as to how to prevent hypertension, diabetes and under-nutrition and what kind of foods should regularly be taken to prevent these diseases. NEC is willing to



support brainstorming sessions, symposia and seminars to help inform the general public regarding adoption of better lifestyle choices.

17. As part of SWACHCH BHARAT initiatives, NEC is willing to support better Housekeeping facilities such as modern laundries and canteens in big hospitals. Incinerators for biomedical waste management could also be supported in all hospitals and necessary projects in this regard may be put forward by State Governments.
18. As there is great shortage of doctors in the region, NEC would support setting up of medical colleges in the States of Arunachal Pradesh, Mizoram and Nagaland where there are no medical college at present. For that purpose the State Governments may request for fund both from Central Government and from NEC.
19. A major hurdle for setting up of medical colleges in NE Region is that sufficient number of qualified doctors may not be readily available for appointment as Professor, Associate Professor and Assistant Professor. As per Medical Council of India's guidelines to become even an Assistant Professor one has to publish at least four research papers in national and/or international journals. As the national journals in medical science in the country are not many, it is naturally difficult for the doctors of NE Region to publish so many research papers. Moreover, due to shortage of doctors in North Eastern Region, the doctors have often to work overtime and they are not having sufficient time to do research work. Therefore, Medical Council of India's guidelines in respect of this should be relaxed for the North Eastern Region so that there are sufficient number of Professors, Associate Professors and Assistant Professors in the Region. States may consider taking up this matter with the GOI.
20. There is a huge shortage of hostels particularly for the girl students in the existing medical colleges of the region particularly in Gauhati Medical College. NEC may consider proposals for augmentation of hostel facilities for girl students.
21. Mental health issues seem to need greater attention in the NE States. NEC would like to support Mental Health Institutes supported and mentored by reputed Institutions like NIMHANS, Bangalore to be set up in all the NE States in the region.
22. AYUSH practitioners may be encouraged to undergo a kind of bridge course e.g. six months training in medical colleges to help them in their practice in places where allopathic doctors are not available.
23. As there is great shortage of registered nurses and midwives, the Region also needs several nursing colleges (providing B.Sc. Nursing degree) and also training centres for GNMs, ANMs. Cabinet Committee on Economic Affairs (CCEA) has approved Ministry of Health and Family Welfare, GOI proposal for opening of 18 ANM schools and 21 GNM schools in the North East region (MOH&FW Annual Report 2015-16). States may take up with the GOI for early setting up of these schools.
24. For the patients of some of the neighbouring countries, there is sufficient scope for development of medical tourism in States like Manipur, Mizoram, Meghalaya and Assam. Therefore, states could be encouraged to look for partnerships with the private sector and voluntary organizations involved in medical care facilities in order

to develop this area in line with the GOI's Act East Policy. States may come up with proposals for funding from NEC for upgradation of hospitals to cater to medical tourists.

25. In the NE region, only the North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences (NEIGRIHMS), Shillong is equipped with central laboratory for testing for H1N1, Severe Acute Respiratory Infection (SARI), Avian Influenza (AI) and Influenza like illness (ILI). NEC is willing to support setting up of more such facilities in Government hospitals.
26. There is an acute shortage of qualified/registered pharmacists in the region. State Governments are encouraged to approach NEC for support to set up more institutes for pharmacists.
27. In the manner in which foreign funding is obtained from World Bank, Asian Development Bank, & European Commission for infrastructure such as roads, bridges and embankments, etc., for implementation of health sector schemes also the State Governments may consider seeking fund from the aforesaid organizations.
28. Presence of arsenic and fluoride in water in some parts of the region has become a serious problem. To provide people with water free from arsenic and fluoride, State Governments may submit reports on the situation in their states and formulate plans to provide people with water free from arsenic and fluoride in the affected areas. NEC would consider funding such proposals.
29. The States may also examine whether machines like CT scan and Dialysis units, which had already been procured, have since been installed and used. Where there is any lack of infrastructure for installation of these machines, NEC may be approached with justifications for taking necessary action.
30. As cancer treatment is very costly, the states may consider how some assistance can be provided to the attendants of patients who receive treatment at cancer hospitals. For this purpose guest houses/dormitories can be constructed at Dr. B. Borooah Cancer hospital in Guwahati, where the attendants should be able to stay paying a nominal rent. Similarly local transport facilities may be arranged in places like Delhi, Chennai, Vellore and Mumbai etc., for large number of patients from NE Region who go there for cancer treatment.
31. It has been seen that in recent years, there is increase in the incidence of kidney stone and gall bladder stone in the region. The Indian Council of Medical Research (ICMR) may be consulted by the States concerned for doing research on this, so that premature deaths and other serious problems can be avoided due to these problems.
32. A major challenge for the States of the NE is the perennial health problems in the region like anaemia, malnutrition, pneumonia, diarrhoea, communicable diseases and new lifestyle diseases. It is often seen that large numbers of people suffer from waterborne diseases like diarrhoea, dysentery, typhoid and jaundice. This can be prevented to a large extent if people drink boiled water. Information and Education regarding basic drinking water hygiene needs to be disseminated to the entire

population, especially in the rural areas. It may also be not out of place to mention that since people of the NE Region are accustomed to taking food by one's hand, better hygiene and using cutlery for eating may be encouraged throughout the region. This may reduce the aforesaid diseases to a great extent.

33. As this region suffers from nutrition deficiencies, food fortification should be considered by the States of the region. Vitamin A and Vitamin D are fat soluble. The State Governments may arrange with local producers of the most commonly used edible oil for fortification with Vitamin A and Vitamin D. Similarly the State Governments may also take up the matter of fortifying wheat (atta) with iron and folic acid in consultation with selected roller flour mills or chakki mills, etc. The cost of fortifying oil and atta may be estimated and if necessary, suitable proposals may be submitted to NEC for procuring Vitamin A, Vitamin K, Iron in suitable form and folic acid from the Public Sector Undertakings.

## **X - Human Resource Development Sector – Education, Skill Development and Sports and Youth Affairs**

### **A Education**

Education is the main driver of Human Resource Development. It primarily shapes the future of our nation and is in need of quality investment to realise the aspirations of its over 1.25 billion people. India spends about 4.13 per cent of its GDP on Education, which, though higher than most South Asian countries (Bangladesh, Pakistan and Sri Lanka), is lower than what other BRICS nations spend on education as a percentage of their GDP (see Table below). Similarly, Gross Enrolment Ratio, especially at the Upper Secondary and Tertiary level needs to be improved to come to the level of other BRICS nations.

**International Comparison on GER & Public Expenditure on Education as % of GDP-2014**

Countries	Gross Enrolment Ratio				Public Expenditure on Education as percent of GDP
	Primary (I-V)	Lower Secondary (VI-VIII)	Upper Secondary (IX-XII)	Tertiary	
India	101.4	89.3	62.5	23.0	4.13
China	103.9	100.4	88.8	39.4	NA
Russia	98.6	98.7	105.1	78.7	4.15
South Africa	99.7	94.9	93.1	19.7	6.05
Brazil	111.06	108.81	93.48	49.28	6.00

The Ministry of Human Resource Development of the Government of India has included planned development, including expanding access & improving quality of educational institutions throughout the country as one of its objectives for the Education Sector. States are encouraged to avail of the facilities, schemes and projects of the GOI for development of the Education sector in the NE Region.

As far as North East India is concerned, according to the 2011 census, the literacy rate except for Assam and Arunachal Pradesh, in the other six States of NER, is higher than the national average (74.04%) with Mizoram topping the list at 91.33%. The rate of literacy is not a problem here; hence, the drive should be more on adequate and quality secondary and higher education. However, a study conducted by Federation of Indian Chambers of Commerce and Industry (FICCI) in 2015 revealed that while a number of quality institutions for higher education have come up in the region, primary and secondary education are still areas that require much improvement in terms of quality and outreach. In this regard, the NE State Governments can also refer to ASER-2016 report published by PRATHAM for assessing Standard of primary education and the gaps therein. As per the report Improvements in basic reading and Mathematics skills have shown some improvement across the country but the States will have to build on this momentum. Clear and achievable learning goals for different stages like Std II, and of Std V and at the end of Standard VIII

needs to be defined clearly. Another nagging problem is provincialisation of schools started by people at grass root level and standardization of Teachers salary for maintaining quality of education at primary stage. Moreover, to bring in uniformity and improvement in primary education, tele education through satellite facilities in remote areas could also be considered. In the area of college education too, while the number of colleges have grown significantly over the years, several of them suffer from a lack of qualified and trained teachers, inadequate infrastructure and laboratories are not sufficiently equipped and there is a general lack of connect with job requirements. The courses being taught at colleges are very often outdated and have very little practical job related requirements built into them. Keeping in mind the gaps in the Education sector in the NE, the NEC Regional Plan seeks to prioritize investments in the following areas:

### **1. Establishment of Regional Institutes**

After threadbare discussions, a need was felt for establishment of the following Regional Institutes in order to develop human resource in areas where professional expertise is still lacking:

- *Regional Institute of Environmental Studies*
- *Regional Institute of Mass Communication*
- *Regional Institute of Architecture and Planning*
- *Regional Institute of Music, Art and Dance*
- *Regional Institute of Civil Aviation*
- *Regional Institute of Teachers Training*
- *Regional Institute of Forensic Science.*

Besides, there is a need for a Regional Statistical Institute along the lines of the Indian Statistical Institute Kolkata and a Regional Indian Institute of Sciences similar to that of IISc Bengaluru should also be set up in the Region.

### **2. Hostel infrastructure and Teachers' residences**

- There is a need to construct Boys and Girls Hostels in remote and border areas for which State Govt. will identify and indicate the numbers required in a phased manner.
- There is also an acute shortage of teachers' quarters in the remote and border areas which also can be addressed through NEC funding if suitable proposals are received from the state governments.

### **3. Promotion of Science and Mathematics**

- Promotion of science and mathematics being an important area for the Education sector, the existing science laboratories in colleges and schools need to be strengthened. The State Governments may identify and submit proposals in phased manner.
- Apart from infrastructure, there is a need for making science and mathematics education attractive and accessible to primary and secondary students in the region. At the primary level, the states may like to include activity based learning for science

and mathematics which GOI is already supporting in many states. For the Secondary level, the State Govt. can identify reputed institutes to impart coaching with NEC support, to the school students of Classes XI and XII in the field of mathematics and sciences to prepare for engineering entrance examination. The projects for which funding may be sought from NEC may be similar to the UDAAN project of the GOI for girls preparing for engineering entrance examinations.

#### **4. Coaching for Competitive Examinations**

Coaching of educated unemployed youth for appearing in Union Public Service, State Public Service, Staff Selection Commission examinations, Bank examination, PSU examinations and various other jobs is necessary as there presently is very little scope for employment in industry and MNCs in NER. For this, State Governments may submit proposals for conducting coaching classes to the youth for various competitive examinations. Such coaching may be conducted through Central Government/ State Governments/ UT Administrations/ PSUs/ Autonomous Bodies under Central/ State Governments; Universities (both Central and State) including the Deemed Universities and Private Universities recognized by concerned authority; and Registered private institutions/NGOs.

#### **5. Information Technology**

- The existing libraries in schools and colleges need to be upgraded with IT facilities so that students can avail digital books and other information on-line.
- Common facility centers in every district headquarters to facilitate the students applying for admission, scholarship, job etc on-line since many rural areas do not have internet facilities and regular power supply.

#### **6. Improvement of Teachers' training**

- Teachers training is an important component as many of the teachers are not trained. The percentage of professionally qualified teachers in Secondary and Higher Secondary Schools in all the NE states is less than the national figure of 85.87 % (District Information System for Education i.e., DISE figures for 2014-15). Therefore, training of teachers needs to be given priority to improve the quality of education in the region. Suitable schemes for teachers' training or for creation of teachers' training infrastructure can be formulated by the states and submitted to the NEC for funding.
- English is one of the strengths of the NE Region and needs to be capitalized properly. English teachers training can be conducted by highly reputed Institutes through the respective State Govt. of NER.

#### **7. NEC scholarships**

There are some brilliant students in the region who cannot afford to go to good schools due to financial constraints. In this regard, besides existing NEC scholarships and other central scholarships, NEC can also consider sponsoring some meritorious students in reputed residential schools.

## **B Skill Development**

The GOI in order to achieve its vision of a 'Skilled India', has tasked the Ministry of Skill Development with co-ordination of all skill development efforts across the country, removal of disconnect between demand and supply of skilled manpower, building the vocational and technical training framework, skill up-gradation, building of new skills, and innovative thinking not only for existing jobs but also jobs that are to be created.

A FICCI-KPMG study (2015) on economically and socially inclusive development strategies for the North East has identified Construction, Tourism and Hospitality, Healthcare, Handloom and Handicrafts, Horticulture and Automobile as the sectors where high demand for skilled manpower is expected. Keeping this need for skilled manpower in mind, the following areas have been prioritized:

### **1. Regional Institute for Skill Development**

There is acute shortage of trained mechanics, electrician, plumber, mason, tiles fitter, technicians in the field of AC repairing, transformer, refrigerator, heavy machineries, computer hardware, washing machine, electronics repair etc in the NE Region. A Regional Institute of Skill Development with state of the art facilities should be set up in the NER to meet the demand for skilled personnel in the NE and to fulfil the skilling mission of the Govt. of India to train five million youth by 2022.

### **2. Agriculture & Allied Sector schools**

Agriculture schools should be set up in every state of the region with diploma courses in agriculture, pisciculture, horticulture, sericulture etc. This will produce entrepreneurs in the Agriculture and Allied sectors and will generate good employment in the region.

### **3. Schools of Foreign Languages**

There is a lack of foreign languages Institutes in the NER for teaching Arabic, Spanish, Chinese, German, French, Japanese and Korean. Proficiency in these languages will provide NE youth employment and business opportunities abroad. Some of the Universities in NER can be considered for opening foreign language department with conventional and short-term courses for which NEC can extend gap funding.

### **4. Tourism and Hospitality Industry**

There is a need for improvement in the quality of hospitality services presently available in the Region. Customer services, communication skills, cultural awareness, languages and other soft skills are required, especially with the NE's potential for tourism. States can submit schemes for training of hospitality industry service providers which NEC can consider for funding.

## **5. Accommodation for women workforce**

Skilled women workforce needs to be promoted. Keeping in mind the safety and security of working women, there is a need for establishing hostels for working women in (a) metro cities outside the NE to accommodate women from the NE Region (b) state capitals of the North Eastern states and (c) district headquarters where good number of government offices exists.

### **C Sports**

As there are a number of sports awards and schemes by GOI as well as the Corporate sector (public as well as private) for promotion of sports in the country, states are encouraged to avail of these facilities to the fullest extent. NEC, through this plan intends to concentrate on development of sports infrastructure which is still lacking in the NE Region. Areas for infrastructure creation are identified as follows:

- One Sports Academy should be established in each State of NER with state of the art facilities. Each State can choose a discipline for establishing its academy considering its strengths and potential. These Academies, established with NEC funding will be of regional character such that all NE states can share and avail their facilities.
- NE has excellent potential in football and therefore there is a requirement to have at least one football stadium of international standard in every state.
- Outdoor and indoor stadiums in every district headquarters of the NER to promote sports.

Besides infrastructure, sports could be encouraged in the following areas also.

- Sponsoring of courses for creation of supporting manpower for sports like coaches, sports medicine specialist, sports psychologists, etc.
- Supporting Sports Authority of India (SAI) Regional Centres in NER for gap funding in areas like Transit Hostel for sportsperson, skill development programmes for physiotherapists, pitch/ ground Curators, etc.
- NEC could consider stipend for sportspersons in the line of NEC Scholarships.
- NEC could also support innovative tournaments in league format for the popular sports like football.
- NEC could also give support to State Association for modern Sports Equipments.

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## **XI - Science and Technology**

As per the NEC's Vision 2020 recommendations special emphasis has been given on the S&T programmes encompassing Remote Sensing Application Programmes, Disaster Management related programmes, IT Applications, S&T Applications, Awareness including R&D and IT education. A good information technology base is essential for the development of every sector in the economy. Considering the importance of IT infrastructure for the development of virtually every sector in the economy of NER, this should be accorded top priority. Other areas for promotion of Science and Technology and its applications include rural technologies, eco-preservation etc. Funding from NEC may be sought in the following areas:

### **1. Regional Management Information System**

Regional Management Information System is an ongoing scheme which is basically meant for promotion of the IT infrastructure in the NEC Secretariat itself for effective management of day to day office works. Under this scheme, the IT work culture within the NEC Secretariat as well in other State Secretariats and other offices of the State Governments will be promoted and encouraged for effective functioning, planning and execution of different projects as well as for speedy execution of office works.

### **2. Research and Development Projects**

Support to projects of R&D for the State Govt. Institutions and Govt. of India Institutions will be provided. Under this Plan, research-oriented projects that would help bring about social equity and economic development to the North East could be funded by NEC. For example, the details of schemes being considered for NER by Dept of Biotechnology were referred to North East Institute of Science and Technology, (NEIST), Jorhat for identification of vital gaps/areas where NEC can possibly supplement. NEIST has come up with recommendations for support to programmes under:

- Health, i.e., Investigations of effective drugs for Communicable/and Non communicable infectious disease, and Health Problems related to occupational and environmental pollutants,
- Agriculture Biotechnology-Improving crop productivity, Post Harvest et,
- Orchid biotechnology,
- Medicinal and aromatic plants
- Food Bio-technology such as Investigation of Entomophagy
- Plant and Animal molecular Biology and
- Bio-informatics such as Infrastructure facility to mine gene and traits of different organisms.

Suitable schemes in other areas may also be submitted by the states along with justification for funding by NEC.

### **3. Promoting bio-diversity and ecological balance**

The North Eastern Region is blessed with unique biodiversity and is recognized as one of the most important bio-diversity hot spots in the world. NEC would like to support initiatives to preserve this natural treasure. Areas for support could be:

- **Preservation and propagation of indigenous wild edible herbs:** of edible robust wild herbs/plants. These wild plants have been consumed by local inhabitants for ages as vegetables and Herbs. These Herbs and Plants are high in nutritional and medicinal value. However, these plants are not identifiable and consumed by public at large. It is therefore envisaged to go for collection, documentation (identification of species in local terms, its growth condition, method of cooking/consumption etc) and propagation of wild eatable herbs in NER at district, state and regional level through State S&T Councils/NGO's, schools etc. A pilot project in this area has already been sanctioned to NERIST which is in its advanced completion stage.  
Further workable plan involving local farmers to commercially cultivate these Vegetables/Herbs for mass consumption are to be envisaged in collaboration with Agricultural Universities, S&T Council, Village development committees. This would to some extent contribute to the lesser dependence on conventional agriculture products coming from outside the region. Propagation would pick up at a significant pace through exchange of species amongst the Districts and States.
- **Preservation of eco-systems through community participation:** Involving local bodies and NGOs in sustainable eco protection of rivulets, streams, promotion of urban waste management.

#### **4. Disaster Management and Earthquake Related Programmes**

Science and technology has an important role in any general strategy to address the problems of mitigation and management of the impacts of natural hazards. A concerted action plan to enhance predictive capabilities and preparedness for meeting emergencies arising from floods, cyclones, earthquakes, drought, landslides and avalanches is being drawn up by GOI. Measures are also being undertaken to promote research on natural phenomena that lead to disasters and human activities that aggravate them. This will be with a view to developing practical technological solutions for pre-disaster preparedness, and mitigation and management of post- disaster situations. Following programmes may be supported by NEC if proper proposals are received –Setting up of a Natural Hazards Risk Evaluation Mechanism, Strengthening of Disaster Management response unit with necessary infrastructure, Seismic micro zonation , Disaster Management Information System with weather forecasting data for NER.

Support will also continue to be provided to the NEIST for development of online / real time seismic network system in NE regions. Disaster Management Information System Communications and Disaster Alert Systems (Broadcasting) in all states of NER and earthquake warning in NER is undertaken. The Flood Early Warning Systems (FLEWS) are being taken up by the NESAC. Endeavors are being made to include early warnings for

Cyclones also in FLEWS Programme. Support will continue to be provided under this scheme.

#### **5. Support for IT Applications and related Services**

Under this ongoing scheme, support is being extended to State specific projects related to e-Gov (Govt office-networking/ e-governance application catering to G2C service). Setting up of IT Parks and STPI to encourage local entrepreneurs to set up IT Software Development centres / BPO's , development of Telemedicine Network for NER, State Data Centres and ICT infrastructure in Districts are covered under this initiative and state may submit proposals in this regard for support by NEC.

#### **6. Promoting IT Education**

- Under this ongoing scheme, the support to IT Education at schools through the respective State Governments in the NER is provided by introducing computers at various schools in the region.
- The scope for supporting Village IT applications through schools can also be explored for promoting IT literacy/education, Identification of village thrust needs, promotion of marketing as well as IT village Planning and Services as well as employment generation in field of Information Technology etc. suitable schemes can be submitted to NEC in this regard.

#### **7. Increasing Public Awareness of Science & Technology**

There is growing need to enhance public awareness of the importance of science and technology in everyday life, and the directions where science and technology taking us. People must be able to consider the implications of emerging science and technology options in areas which impinge directly upon their lives, including the ethical and moral, legal, social and economic aspects. In recent years, advances in biotechnology and information technology have dramatically increased public interest in technology options in wide ranging areas. Scientific work and policies arising from these have to be highly transparent and widely understood.

This Plan will extend support for wide dissemination of scientific knowledge, through the setting up of science museums/centres, planetariums and the like. Every effort may be made to convey to the young the excitement in scientific and technological advances and to instill scientific temper in the population at large. Special support may be provided for programmes that seek to popularize and promote science and technology in all parts of the NER. Programmes may also be developed to promote learning and dissemination of science through the various regional languages, to enable effective science communication at all levels.

#### **8. Promotion of traditional rural technology**

The rural economy is the heart of NE India. Scientific advancement, however, has not been able to reach the remote habitations of the Region. NEC would like to partner with Institutes

in the North East like the NIRD in Guwahati, SIRD of the states, Centre for Rural Technology at IIT Guwahati, to promote and support the appropriate traditional rural technology of the NE Region and upgrade them, so that it could be perfected for wider applications and employment generations.

#### **9. Setting up of North Eastern Crime Information Centre (NECIC)**

NEC could consider funding the establishment of North Eastern Crime Information Centre (NECIC) in every State capital in NE-States for facilitation of a criminal justice information system (i.e. criminal record history information, fugitives, stolen properties and missing persons). The Centres will be available to Central, State, and local law enforcement and other criminal justice agencies and should be operational 24 hours a day, 365 days a year. This information should assist authorized agencies in criminal justice and related law enforcement objectives.

#### **10. Telecommunications**

There is requirement to strengthen telecommunication connectivity in the region to fulfil the Digital India programme announced by the Govt. of India. It has been observed that the normal practice of laying underground optical fibres in N.E. Region does not yield the desired results as very often these underground OFCs get damaged due to floods, landslides, road expansion, road repair works and other developmental activities. However, the states' high power transmission lines are relatively free from much such natural and man-made interference which cause damage to the OFCs. It is proposed that NEC could support the laying of OFC cables along the existing high power transmission lines network in the NE states. This will provide robust connectivity which will improve the telecommunication services in the region. For the regional plan 2017-18 to 2019-20, NEC can consider funding for laying 300 KMs OPGW (Optical Ground Wire) per State along the high power transmission lines, initially, for the most important routes to connect State Capitals to District Headquarters having poor connectivity. This is considered very important as many districts in the region are not having reliable telecom connectivity. Considering the average capital investment of Rs.5.5 lakhs per KM, each State will require 16.5 Cr. A capital outlay of Rs.132 Cr. may be earmarked for the requirement of 8 States in this plan.

#### **11. Space Applications**

North Eastern Space Applications Centre (NESAC) was established as a joint initiative of Department of Space (DOS) and the North Eastern Council (NEC) and came into being on 5th of September, 2000. The Centre was set up to augment the developmental process in the region by providing the advanced space technology support. Some of the activities that are proposed to be implemented through NESAC are:

##### **i. Infrastructure development**

- Mapping of remote areas which are not connected / sparsely connected by road network and gap assessment in road connectivity.

- GIS enabled mapping of health centers across NER of India.

**ii. IT support**

- Development of web-portal and mobile based app for monitoring of various projects sponsored by NEC and for different other applications for monitoring and management purposes.
- State-wise development of GIS enabled crime Information System for NER.

**iii. Satellite communication**

- Revival of the satellite based tele-education network in NER and making the same fully operational with one studio and 50 receiving terminals at every state.
- Upgradation of the tele-medicine network to extend the same up to district level. Connecting all major specialty and super-specialty hospital into the network. This will be taken up as a new initiative with funding support from NEC.
- Conducting feasibility studies for high speed digital connectivity at village level and extending up to school level particularly for the remote and hilly areas, using high throughput satellite that will be launched in near future.

**iv. Promoting Tourism**

- Development of web-enabled GIS based tourist information system for major tourist destinations in NER.

**v. Meteorological observation network**

- Augmenting the existing Automatic Weather System (AWS) network with AWS having rainfall, temperature, and humidity measurement, to expand the network to block level.
- Setting up of Doppler Weather Radar in C-band and X-band (for hilly regions) for high resolution precipitation measurement to fill the existing gaps in surface observations and development of accurate and reliable warning system.

**vi. Disaster Management support**

- Extension of FLEWS project to all the NER states. NESAC has already initiated work towards meeting this objective using internal resources. NESAC may approach NEC, in near future, to operationalise the project for entire NER.
- Operationalisation of Early warning of Thunderstorms, cyclones, agricultural droughts over NER of India, using high resolution meteorological data from the extended network of Automatic Weather Stations and Doppler Weather Radars.

- Forecasting of vector major borne diseases (JE, Malaria, etc) that are prevalent in NER of India.
- Development of disaster management information system with real time availability of weather data and weather forecast.
- Micro-seismic hazard zonation mapping for selected cities in NER.

**vii. Capacity Building and Outreach**

- Establishment of the regional centre of space technology at NESAC by 2017-18, for training and capacity building, facilitating user departments of state governments in NER, academic institutions, and research centres for short and long duration training programme in addition to tailor made courses as per their requirement.

**viii. Research and Development studies**

- Studies on monitoring of earthquake precursors and try to develop earthquake forecasting model using a multi-parameter approach.
- Studies on development of landslide early warning system for rainfall induced landslides using data from AWSs, DWRs, and by setting up a network of ground based sensors for monitoring soil conditions.
- Research on inventory assessment and regional characterization of major climate change drivers like greenhouse gases, aerosols, etc and provide high resolution and improved climate projections for NER.
- Studies on climate change impact assessment on key sectors like Agriculture, Water resources, Forestry, Disaster frequency and intensity, etc.
- Biodiversity mapping for NE Region.

**ix. Popularizing Science & Technology in NER**

- Setting up of space museum corner within the existing state level museums in NE states. NESAC shall support in conceptualizing the museum with space technology models, video walls, virtual reality, 3D visualization, etc on different aspects of space technology.
- Conducting workshops/seminar on use of space technology once a year with funding support from NEC.

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## **XII - Information and Public Relations**

Given the backdrop of occasional negative publicity/inadequate coverage of the NER, both in Print & Electronic Media, it seems that one of the first and foremost objectives of the IPR Sector NEC, would be to herald a new genre of publicity venture for the North Eastern Region in the country as a whole, if not the globe, by means of innovative concerted, cohesive and continuous multimedia campaign. The publicity exercise should pave the way for the socio-economic and cultural development and progress of the region towards actualization of the concept of 'Look East Policy' and NER 'Vision 2020 Document' in its true spirit and measure.

The following activities were short-listed to be undertaken by the NEC in the instant Plan:

- i. **Promotion of the NEC activities in all media outlets:** The NEC will continue to exercise consistent and persistent effort to create a positive image of the region to both the national and international audience with the objective of attracting Tourists, Investors as well as Industrialists to the region. The help of Govt. Sector organizations like AIR and Doordarshan may be taken in the matter
- ii. **Heroes of the North-Eastern India:** Under this programme, a series of books on Heroes of North- Eastern India can be published. To begin with, 5 books can be brought out in collaboration with or through National Book Trust, India or ICHR.
- iii. **Books on NE Region:** Efforts can also be made by I&PR Sector to bring out books through Govt. and Non-Govt. Sector Publisher on various aspects of North- Eastern India.
- iv. **Annual NEC Report/Year Book:** It was felt that an Annual Report/Year Book containing various activities, success stories, events and achievements of NEC with colored photographs may be brought out by I&PR Sector.
- v. **Helping the Existing Infrastructure/Institutions:** Recommendation of the NEC Executive Committee to set up Centers of Excellence in the field of Journalism/ Mass media and Music, Dance, Theatrical Arts and Liberal Arts to be implemented.
- vi. **University of Music:** There is also a need to set up a University of Music at Shillong, considered to be the Music Capital of the NER, and to take up the matter with State Govt. and concerned Central Govt. Institutions/ Organizations.
- vii. **Promoting Manufacturing of Musical Instruments:** it was felt NEC may financially assist institutions in the NER for manufacturing of Musical Instruments as there is demand and raw materials like Wood, Bamboo etc. are available. It was felt that cane and Bamboo Technology Centre (CBTC) may have to work on this idea.
- viii. **Promoting Traditional Theatre and Collaboration with National Institutes:** It was felt that Indigenous Theatre in Oral and Folk Tradition in the NER need be preserved by NEC by working with North Eastern Zonal Cultural Centre, Sangeet Natak Akademi, Indira Gandhi National Centre for the Arts, National School of Drama etc.
- ix. **Promoting Indigenous Culture and tradition:** There is a need to document and promote the vibrant culture and traditions of the North East especially in virgin

areas where there has not been any substantial work done. NEC can support such initiatives from the states.

- x. **Supporting Govt. Film Studios:** It was felt that in view of the growth in production of Feature Films and increase in the number of Filmmakers in the NER, the existing Govt. Film Studios are to be supported by NEC.
- xi. **Upgrading the Regional Documentation and Information Centre.** In keeping with the Prime Minister's advice to make the NEC a Centre of Excellence equipped with adequate resources, the NEC Regional Documentation and Information Centre will continue to be supported with the latest resources, infrastructure and IT tools in order to make it into a world class resource centre for the North East.

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### **XIII - Evaluation and Monitoring Sector**

For effective evaluation and monitoring, the existence of a multi-disciplinary team of middle level officers is an important prerequisite. However, presently, there are no regular middle level officers in the Evaluation and Monitoring Sector. Despite acute manpower constraints, a total of 44 projects were inspected between April and November 2016. Given the need for strengthening of manpower in the whole of NEC Secretariat, this Sector has initiated the process of engaging/appointing consultants for monitoring the NEC-funded projects. Moreover, the Central/State Government institutions /organizations are being engaged for third party evaluation of the NEC funded projects /schemes. Apart from regular monitoring & evaluation of NEC schemes, the following activities will be pursued by this Sector in the ensuing Regional Plan period: -

#### **1. Support for Seminars, Symposia, Workshops, etc.**

Workshops, seminars and symposia help in evolving and sharing new thoughts and ideas among the participants of varied fields relating to socio-economic development of an economy. By providing gap-funding to colleges, Universities, think tanks, State and Central Government organizations, NEC is making an effort to ensure that the Region benefits from the deliberations and discussions that take place during such events. This will not only help academicians but also help in policy formulation. Reinventing and exploring the potentials and opportunities for the socio-economic development of this region constitute an integral part of such capacity building measures. Conducting Seminars, Symposia, Workshops, etc. will help in identifying the areas of strength, weaknesses, opportunities and threats (SWOT) of various socio-economic aspects of the NE Region which will ultimately be useful and provide area-specific clues/ inputs for better policy formulation. NEC will continue to provide financial assistance to seminars/ workshops/ symposia which cover issues directly relevant for the development of North Eastern Region.

Since expenditure for NEC Plenaries, Executive Committee meetings of the Council, meetings of the Sectoral Empowered Committees, and so on are also met out of budget allocation under this scheme, a tentative outlay of about Rs.20.00 crore for the three year period of the Regional Plan is proposed. The annual break-up may be Rs.5.50 crore in the first year, Rs.6.50 crore in the second year and Rs.8.00 crore in the third year.

#### **2. Planning & Monitoring of NEC Schemes by other Agencies**

The present nomenclature of this scheme is "Setting up of Project Planning & Monitoring Cell in NEC Secretariat". Under this Scheme, NEC has floated Expressions of Interest (EoI) to identify suitable State/Central Government institutions/ organizations and other reputed research institutions located in the NE Region and from outside the Regions for carrying out evaluation work and Impact Assessment Studies of NEC funded projects. The objective is being made materialized through identification, negotiation and signing of MoUs/ MoAs

between the NEC Secretariat and such organizations/institutions/ agencies and engaging them to carry out evaluation studies. Some evaluation studies of the NEC funded projects have already been completed and Reports were submitted by these agencies. Certain studies which are crucial from the socio-economic development for the NE Region are being carried out. NEC will continue to fund E&M by reputed State/Central Government institutions /organizations, especially reputed organisations which have had experience of reviewing major programmes of the Government and also make use of the Social Audit organizations of the state governments. Administration Division of NEC Secretariat has also been making use of fund under this scheme to procure new vehicles which are deemed necessary for facilitating monitoring work.

Under an existing head of account, Rs.10.00 lakh only can be provided annually for activities under this scheme. However, it is desirable that another head of account should be created under which about Rs.5.70 crore may be provided taking the total tentative outlay to Rs.6.00 crore for the three year period of the Regional Plan @ Rs.2.00 crore annually.

### **3. Support for capacity building of states for preparation of DPRs etc.**

The Revitalization Committee for NEC (2004) felt that Suitable M&E structure is needed from the State-level down to the District-level and had recommended Setting up (or strengthening) of such structures in States or their periodic skill up gradation programmes to be implemented by NEC in consultation with State Governments. NEC will support capacity-building programme for the officials of the North Eastern States on subjects such as preparation of Concept Notes, DPRs, monitoring of Utilisation Certificates, evaluation of NEC projects etc.

Since it is now envisaged that suitable M&E structure is needed to be set up or strengthened under this scheme at State level and District level, it is proposed that each State may be assisted @ Rs. 1.00 crore in the first year of the Regional Plan, Rs. 1.50 crore in the second year and Rs. 2.00 crore in the third year. A tentative outlay of about Rs.36.00 crore for the stated activities in all the eight States of NER is therefore proposed.

### **4. Support for Setting up of Project Formulation and Quality Management Cell**

Over the years, the NEC Secretariat has funded a large number of projects under various Sectors and these projects are required to be mandatorily inspected by E&M Sector through its team of consultants who have been appointed on contractual basis in the absence of regular middle level posts under the Sector. Presently there are four consultants – one with civil engineering background, one with electrical engineering background and two with managerial economics background. The process for recruiting seven more consultants with various academic backgrounds has been initiated. Besides, each and every Sector in the NEC Secretariat is in dire need of technical helping hands to assist the Sector Heads in their day to day work due to non-existence of middle level posts in various Sectors. This particular

problem was addressed through the engagement of Young Professionals whose services will continue to be needed till such time that regular posts are sanctioned as recommended by the Revitalization Committee and approved by the Govt. of India. Funds provided under this scheme are also made use by Administration Division for payment of monthly remuneration to the contractual stenographers, data entry operators, etc. Hence, during the coming years there is a need to significantly augment budgetary allocation under this scheme so that all Sectors of the NEC Secretariat can perform their respective roles without much constraint.

It is proposed that Rs.2.00 crore may be provided in the first year of the Regional Plan, Rs.3.00 crore in the second year and Rs.3.00 crore in the third year since, in addition to on-going activities, the monitoring related travel expenses within the region may also be met out of allocation under this scheme. Thus the total proposed outlay comes to about Rs.8.00 crore.

## **5. Setting up of Good Governance Cell in the NEC**

In his address to the NEC Plenary in May 2016, the Hon'ble Prime Minister Shri Narendra Modi said:

*"You may like to consider developing the North Eastern Council as a state-of-the-art resource centre for the North Eastern states with the necessary resources, knowledge and skills. The resource centre may enable the states and the implementing agencies to properly plan and execute projects, promote research and innovations and provide strategic policy vision for the region. The North Eastern Council may look into developing a specialised domain expertise either by itself or through an agency model to assist states and central ministries in their development planning as also problem solving needs. This will enable the imbibing of good governance and best practices in the region".*

NEC has, increasingly over the years, been involving itself in funding and evaluating various developmental projects in the North East Region (NER). In the light of the Prime Minister's advice, it is felt that a Good Governance Cell within NEC comprising of experts having exposure to proper modern management techniques in planning and implementing various schemes is necessary. This Cell will associate with various think tanks in the Region for evolving policy frameworks and strategies. This will help the NEC in generating data base as well as advising the Secretariat for improving the efficiency in proper management of the schemes. This will be a new initiative for which adequate budgetary provision is required to be made to enable the NEC Secretariat to attract the required personnel as well as organizations with the desired expertise/ skills and experience to associate themselves with the NEC as envisaged by the Hon'ble Prime Minister. The identification of such personnel and organizations will, however, be initiated by the concerned Sector Heads.

The outlay under this last scheme may be kept at Rs.30 crore tentatively @ Rs.10.00 crore annually during the three years of the Regional Plan. This is because developing a state-of-the-art resource centre and promotion of research and innovations either by itself or

through an agency model requires adequate provision of financial resource. It is opined that in either case, the NEC Secretariat will have to start almost from scratch since the existing set-up needs to be properly restructured and re-engineered for achieving the Prime Minister's vision and the development of an agency model also entails expenditure on consultancy/ agency charges, etc.

Hence the total proposed outlay under E&M Sector adds up to Rs.100.00 crore only.

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