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North-East

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C K Das

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Manjula Wadhwa

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A Tool for Economic Prosperity

Nirendra Dev

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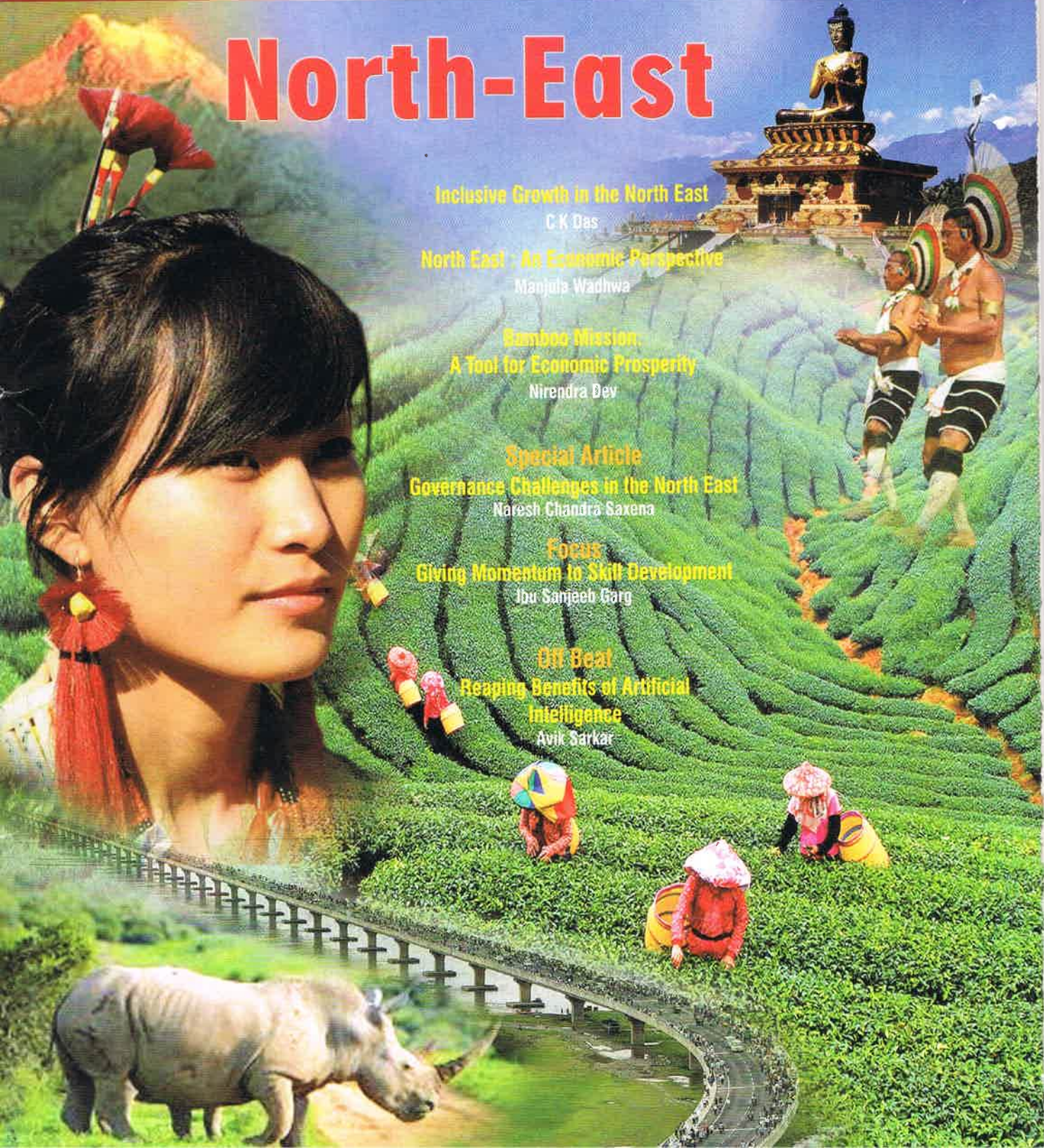
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Off Beat

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Avik Sarkar





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*Let noble thoughts come to us from all sides
Rig Veda*

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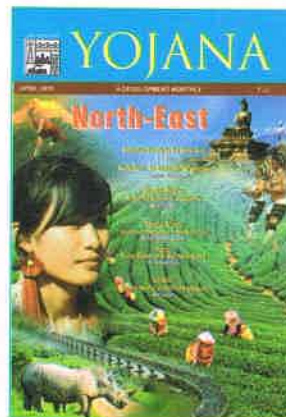
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Revitalising the North East

When we visualize the North East what comes to mind are the rhinos of Kaziranga, the rain clouds of Meghalaya, the bamboo handicrafts and lovely handloom dress material, the orchids and last but not the least, the tea gardens. We also remember our old school and college friends from the North East, who moved among as fellow students or colleagues.

But, the North East is not just about pleasant tourist spots, fabulous handlooms and handicrafts or its friendly people. It is an area with an entity of its own. Isolated from the geographical mainstream of the nation due to its peculiar location. The 'seven sisters' of the North East plus Sikkim have evolved a culture and identity which is different from the rest of India. These eight states, Assam, Meghalaya, Tripura, Mizoram, Nagaland, Arunachal Pradesh, Manipur and Sikkim are always discussed as a complete entity in all planning fora. Budget allocations, infrastructure facilities allocated development projects are all planned for the region as a whole. This has given the region an impression of being different and unique from the rest of the nation.



Mainly due to its geographical isolation and perceived difference, the region has, faced backwardness and indifferent development in many sectors. Low agricultural productivity, low credit flow from banks, absence of large scale industrial base, lack of infrastructural facilities, etc have impeded its path to inclusive growth. Government's over the period of time have been taking steps to ensure parallel and balanced development of North East. Present government's renewed emphasis on translating the 'Act East' policy into reality has brought great hopes for the region. Launch of historic projects like first ever train Mendipathar in Meghalaya to Guwahati in Assam and dedicated Unit-II of the ONGC Tripura Company Ltd Power Plant to the nation, India's longest bridge 9.15 km Dhola-Sadiya bridge in Assam, laying of foundation stone of IIIT Guwahati etc. have accelerated the pace of development in the North East. Budget of North East has also been increased and stands at Rs 48,000 crore approximately as of now.

North East relies on agriculture as the major sustenance occupation. However, low agricultural productivity and problems due to traditional farming practices like jhum cultivation have created livelihood problems for the region. To alleviate this situation the government has introduced a restructured National Bamboo Mission with an allocation of Rs 1290 crore which is expected to promote holistic development of bamboo.

Connectivity has been another major hurdle in the development of the region. Poor rail and road connectivity, and almost non-existent air connectivity had slowed down the economy as goods and services could not move to and from the region to other parts of the country and vice versa. The government has now given a substantial budgetary allocation for development of infrastructural facilities in the region with Rs 5,886 crore committed over the past four years for rail connectivity in the region; a staggering Rs 2 lakh crore of allocation for investment in new roads, bridges etc from 2014-19; Rs 1014 crore for revival of 50 airports in the region. This will boost connectivity of the North East with not just the other parts of the country but also neighbouring countries like Myanmar, Bhutan and Bangladesh. Rs 1292 crore has been set aside for ongoing power projects with an additional allocation of Rs 234 crore for developing solar power plants in the region.

Lack of good facilities for education and skill development had forced its youth to leave the region to join institutes in other regions. Similarly, lack of job opportunities had also forced migration of youth in search of jobs elsewhere. Introduction of various skill development initiatives like Employment Generation Mission and Assam State Livelihood Mission in Assam, Meghalaya State Skill Development Society etc. have opened up new avenues for the youth in the North East to equip themselves to acquire suitable jobs in the region so as to obviate the necessity to migrate.

Women of the region have traditionally been suppressed with no status in the family and no say in financial affairs. Initiatives like creation of self help groups have helped to empower women in the region. North Eastern region Community Resource Management Project for Upland Areas (NERCOMP) and NARMGs (Natural Resource Management Groups) etc. have acted as vehicle for bringing about gender empowerment.

Such renewed efforts to bring about development of all sections of society and make North East a part of the national development process have ensured that the people of the North East are never going to be considered as different either developmentally or culturally from the rest of the country.

Inclusive Growth in the North East

C K Das



At present, the Central government has taken several initiatives for all-round inclusive development of the region. The Centre's renewed emphasis on translating the Act East Policy into reality has brought great hopes to the people of the North East. To make North East the hub for opening this part of the country to South East Asian nations like Bangladesh, Nepal and Bhutan the region has to be made economically more active and prosperous. Connecting the aforesaid countries with North East through roads, rail lines, riverways and airways will automatically increase the flow of men, materials, technology and ideas from and to the North East

North Eastern Region of India, commonly known as North East, consists of eight states namely Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura and its geographical area is 2,62,179 square kilometers. This area is smaller than the geographical area of some big states of India like Rajasthan, Madhya Pradesh and Maharashtra. North East is connected to the rest of the country through a narrow corridor, generally called the chicken neck, near Siliguri region. North East is surrounded by five foreign countries. These are Bangladesh, Bhutan, China, Nepal and Myanmar. Only about thirty to thirty five percent of the area of North East is plain land, mostly in three valleys namely the Brahmaputra, the Barak and the Imphal Valleys. The rest of the area is hilly land. About three-fourth of the area of North East are yet to be brought under cadastral survey. For the vast unsurveyed areas no proper and authenticated land records are available to show individual title over land.

Compared to the area of the North East its population has apparently increased abnormally from the beginning of the last century. The population of North East was only about 44 lakhs when the population of the then India of 1901 was more

than 29 crores. In 2011 the population of North East has increased to 450 lakhs and that of 'India of 1901' has increased to about 15600 lakh or 156 crore (India 121 cr. plus Pakistan 18 cr. plus Bangladesh 17 cr.) This shows that between 1901 to 2011 when the population of India of 1901 has increased by about 5.4 times the population of North East has increased by more than ten times. Continuous migration from surrounding areas has increased the population of the North East in such a way that the average size of land holding in the region is only about one hectare.

The picture of the North East will not be complete if something is not said about the very high rainfall and presence of one of the biggest rivers of the world namely the Brahmaputra and its major tributaries numbering more than seventy in North East. The average annual rainfall in North east is more than two thousand five hundred millimeters. Compared to the size of the Brahmaputra river, the valley is very narrow. Very high rainfall, big size of the river basins (the Brahmaputra and the Barak) and narrow valleys are regularly causing severe floods, erosion, landslides and sand deposition in the North East causing loss of huge areas of valuable agricultural land and reduction of the average size of land holdings in the region.

The author is an IAS officer of 1975 batch and has served in the States of Assam and Meghalaya in various positions including Additional Chief Secretary to the Government of Assam. He is now a Member of the North Eastern Council at Shillong.



It is stated that since the great earthquake (of intensity of 8.5 in Richter Scale) of 1950 in Assam, flood and erosion have increased in the state and till date about five to six thousand square kilometers of land have been lost due to erosion by rivers. This has made lakhs of people landless and homeless in the state. Rehabilitation of erosion and landslide affected landless people of North East and bringing erosion within the definition of natural calamity in State Disaster Response Funds' guidelines for paying compensation, are urgently required in this region.

Despite these natural and manmade (migration) challenges the economic condition of the North East was almost at par with the rest of the country at the time of the country's partition. But from 1947 the following major historic events have changed North East dramatically and retarded its development in many sectors. These events are-

- a) Partition of the country - When the major road, rail and river routes connecting North East to the rest of the country suddenly got snapped.
- b) The Chinese aggression of 1962 - When the Chinese army entered Arunachal Pradesh (called NEFA at that time) and returned of their own. This apparently created a feeling in the minds of some private investors, whether rightly or wrongly, that large scale investment in North East should wait for some time.
- c) The Bangladesh Liberation war of 1971 - When crores of people from Bangladesh entered some states of North East as refugees. Though most of the refugees returned to Bangladesh it appears that large scale demographic change was noticed in some of the states of North East bordering Bangladesh. From the end of the seventies of the last century problems of insurgency started in states like Assam, Meghalaya, Tripura and Manipur. Insurgency affected the present day Nagaland and Mizoram in the fifties and sixties of the last century. Now, of course, due to various actions taken by the Central and State governments insurgency in the region is no longer a matter of great concern.

Proper rehabilitation of thousands of immigrants who have surrendered to the authorities during the last almost four decades is also very important for the North East Region.

Though the indigenous population of the North East may be less than about three crores, there are more than one hundred such groups, the populations of many of which are less than twenty thousand per group. Many such small ethnic groups stare at marginalization.

In addition to the aforesaid natural and historical challenges some other major challenges of North East are the following-

- a) Low agricultural productivity (about 2000 kg rice per hectare) Rice (paddy) is the main crop of the region.
- b) Low cropping intensity (about 1.5)
- c) Low coverage of irrigation.
- d) Low application of chemical fertilizers.

- e) Low credit flow from banks. Credit deposit ratio is less than fifty percent in the North East.
- f) Inadequate availability of certified seeds and good quality planting materials throughout the region, throughout the year, for all the farmers.
- g) Inadequate facilities for godowns, warehouses and cold storage etc.
- h) Absence of modern well equipped markets or mandis in the region, except in some few places.
- i) Very low per capita consumption of power compared to the national average.
- j) Very low use of power for irrigation.
- k) Non-availability of ores of industrially useful metals like iron, aluminum, copper, zinc, tin, lead and nickel etc; and substances like mica and sulfur etc.
- l) Non-availability of big reserve of good quality coal. Coal present in the North East often contains high percentage of sulfur which makes it unfit for use in industry.
- m) Inadequate number of polytechnics and higher institutions for engineering, medical and nursing studies etc.
- n) Teachers' Training in the whole of North East is another issue which needs immediate attention



for overall improvement of the general standard of education in the region. Special steps are also necessary for improving the standard of teaching mathematics and science in schools of the North East.

- o) Absence of big industries except four oil refineries and two petrochemical complexes.

Of course, in the state of Assam and North East there have been rail lines, tea gardens and oil and rice mills set up from the beginning of the last century. In the last few decades in the whole of North East, there has been remarkable improvement in road,

rail and air connectivity and, in the field of telecommunication. There are now many new universities, medical colleges and engineering colleges in the region established in the last two decades. There is now also one IIT and one IIM in the North East.

The average per capita annual income of the region is about seventy per cent of the national average. The literacy rate (74.48) of the region is at par with the national rate (74.04)

North East is comparatively backward even after seven decades of independence mostly due to the aforesaid challenges. In the absence of large scale manufacturing industrial base, the future of the region depends primarily on developing the following sectors-

- a) Agriculture including horticulture and floriculture;
- b) Dairy farming;
- c) Goat rearing;
- d) Piggery;
- e) Poultry;
- f) Duckery;
- g) Fishery;
- h) Food and meat processing;
- i) Tourism;
- j) Sericulture and weaving and





handloom and textiles through increasing production of yarns and improving designs of garments;

- k) Production of organic tea, organic food, mushroom and honey;
- l) Production of plastic goods from high and low density polyethylene manufactured in Brahmaputra Cracker and Polymers Ltd. at Dibrugarh;
- m) Setting up small and medium scale industries based on huge quantities of bamboo, cane, jute, paddy husk and medicinal plants;
- n) Developing industries for quality improvement and packaging of locally available ginger and turmeric;
- o) Utilizing the huge amount of water available in local rivers and streams for generating hydel power and arranging irrigation facilities;
- p) Setting up industries for making garments, pharmaceuticals, paper and sugar etc. (Due to high rainfall and moisture content in the soil, North East seems highly suitable for large scale production of sugarcane, pulses, oil seeds and costly flowers like orchids);
- q) Setting up sufficient number of polytechnics and institutions for nursing, paramedics, pharmacy, repairing transformers and items like television, air conditioners,

computers, washing machines, motor vehicles and refrigerator etc.

North East is very rich in culture; and there is great talent among the youth of the region in music, dancing and painting etc. If sufficient numbers of schools are set up in the region for teaching singing, dancing and playing various musical instruments, then a large number of youngsters are likely to get employment in these fields.

If large scale investment is arranged in the above sectors and cropping intensity in the region is increased to 2 or 2.5 there will be sufficient employment opportunities for the local people in the region. The number of bank branches and credit-deposit ratio also has to be increased in the region. There is also urgent need for improving tele connectivity in the region for bringing about complete financial and digital inclusion of the people of North East.

At present, the Central government has taken several initiatives for all-round inclusive development of the region. The Centre's renewed emphasis on translating the Act East Policy into reality has brought great hopes to the people of the North East. To make the North East the hub for opening this part of the country to South East Asian nations like Bangladesh, Nepal and Bhutan the region has to be made economically more active and

prosperous. Connecting the aforesaid countries with North East through roadways, rail lines, riverways and air will automatically increase the flow of men, materials, technology and ideas from and to the North East. For the people of the aforesaid countries, arrangements can be made in the North East for religious, ecological, adventure and medical tourism. This will also improve cultural and academic relations among the people of the North East and the surrounding areas including the neighboring countries mentioned earlier.

To ensure fair and equitable distribution of the fruits of development to all concerned, special and immediate steps are necessary for the various small indigenous ethnic groups of the North East. It has already been reported in the media that languages of eleven ethnic groups of the North East are staring at extinction as each of these languages are spoken by less than ten thousand people. It has to be specially ensured that the process of development does not by-pass the small and marginalized ethnic groups of the region.

The pollution free atmosphere of the North East and the large number of youths who are very fluent in English can make the policy makers go a big way for setting up electronic industries and BPOs in the region.

To solve the acute unemployment problem in the region there should be special drives for increasing the intake of North East youth in railways, nationalized banks, central paramilitary forces including Assam rifles, airlines, oil refineries and other big central public sector undertakings.

Finally, to provide incentives to all the people of North East in developing agriculture, industry and business, immediate steps are necessary for land reform including cadastral survey of non-forest un-surveyed areas, preparation of land records and giving of ownership right of land to all eligible people as per provisions of relevant land laws. □

(E-mail: ck.das09@gmail.com)

North East : An Economic Perspective

Manjula Wadhwa



...innovation, initiatives, ideas and implementation- all the four need to go together. What is needed is inclusive growth through inclusive development with focus on improved governance, doing away with the draconian laws and ensuring that the local communities are empowered to implement basic needs and services. For this, all the stakeholders need to formulate an all-comprehensive realistic plan for the overall development of NE states

The Seven Sisters of North East', comprising of seven separate but adjoining states as well as standalone Sikkim, definitely occupy a distinctive place in our country, primarily due to their social, cultural, political, geographical and historical features. It is worth mentioning that Tripura and Mizoram are two of the country's most highly literate states. The Assam tea industry is the second largest commercial producer of tea, next only to China. The first ever oil well of Asia, is in Digboi of Assam.

Currently, if we look at the bright side of the picture, as per *India Spend research*, the impressive growth rate of 9.7 per cent of Meghalaya is higher than that of the fastest-growing big state, MP at 9.5 per cent. Arunachal Pradesh grew faster than Gujarat. Fewer people, (12.8 million) fall in the BPL category in the entire NER than in just one large state, Karnataka (12.9 million). On the other hand in contrast, Tripura reported India's highest unemployment rate, 25.2 per cent in urban areas, followed closely by Nagaland with 23.8 per cent in 2011-12. The share of industrial sector for all the 8 states has increased while the share of agriculture and allied activities has declined. Unemployment in urban areas across all the NE states is higher than rural areas and is in line with the national pattern. The poverty here is also unevenly spread: Manipur is poorest: Sikkim the richest.

In fact, since the colonial period NE region has been a witness to highly inequitable rates of economic growth. For the British, the North-East was a storehouse of raw materials such as coal, natural oil, forests and tea. There was a mass extraction of these resources which were then exported to other parts of the country for processing. This region, however, did not get benefit from this process as the British did not set up processing and manufacturing units here, nor did they pay any attention towards the development of transport and communication facilities in the region. With the partition of India, for a long period of time, trade with Bangladesh (East Pakistan) came to a stop which seriously damaged the economic and growth potential of the region. This widened the gap between the region and rest of India. In recent times, the north-eastern region has performed reasonably well in comparison to the all India average situation in respect of human development indicators but it has failed in bringing commensurate economic growth.

The reasons behind the tardy progress of NER are attributable to the following factors-

Geographical Factors: The hills account for about 70 per cent area of NER and accommodate about 30 per cent of the population and the

The author is Asstt. General Manager, NABARD, Haryana Regional Office, Chandigarh. She has more than 400 publications to her credit and has been participating in the Talks/Panel Discussions of Akashwani and Doordarshan.

Gross State Domestic Product (GSDP), Per Capita Income (PCI) and Growth Rate-2016-17(A)

SN	State	Population 2011	GSDP		Per Capita Income		2016-17(A)
			(Rs. In	crores)	(NSDP) (Rs.)		Growth Rate
			At Current	At Constant	At Current	At Constant	of GSDP at
			Prices	(2011-12) Prices	Prices	(2011-12) Prices	(2011-12) Prices
1	2	3	4	5	6	7	8
1	Andhra Pr.	84,580,777	NA	NA	NA	NA	NA
2	Arunachal Pr.	1383727	NA	NA	NA	NA	NA
3	Assam	31205576	NA	NA	NA	NA	NA
4	Bihar	104099452	NA	NA	NA	NA	NA
5	Chhattisgarh	25545198	290140	223932	91772	71214	NA
6	Goa	1458545	NA	NA	NA	NA	NA
7	Gujarat	60439692	NA	NA	NA	NA	NA
8	Haryana	25351462	NA	NA	NA	NA	NA
9	Himachal Pr.	6864602	NA	NA	NA	NA	NA
10	J & K	12541302	NA	NA	NA	NA	NA
11	Jharkhand	32988134	NA	NA	NA	NA	NA
12	Karnataka	61095297	NA	NA	NA	NA	NA
13	Kerala	33406061	NA	NA	NA	NA	NA
14	Madhya Pr.	72626809	640484	465212	72599	51852	12.21
15	Maharashtra	112374333	NA	NA	NA	NA	NA
16	Manipur	2570390	NA	NA	NA	NA	NA
17	Meghalaya	2966889	29567	24005	79332	63678	6.65
18	Mizoram	1097206	NA	NA	NA	NA	NA
19	Nagaland	1978502	NA	NA	NA	NA	NA
20	Odisha	41974218	378991	314364	75223	61678	7.94
21	Punjab	27743338	427870	348487	128821	103726	5.93
22	Rajasthan	68548437	NA	NA	NA	NA	NA
23	Sikkim	610577	NA	NA	NA	NA	NA
24	Tamil Nadu	72147030	NA	NA	NA	NA	NA
25	Telangana		NA	NA	NA	NA	NA
26	Tripura	3673917	NA	NA	NA	NA	NA
27	Uttar Pradesh	199812341	NA	NA	NA	NA	NA
28	Uttarakhand	10086292	NA	NA	NA	NA	NA
29	West Bengal	91276115					
30	A & N islands	380581	NA	NA	NA	NA	NA
31	Chandigarh	1055450	NA	NA	NA	NA	NA
32	Delhi	16787941	622385	498217	303073	240318	8.26
33	Puducherry	1247953	29557	23656	190384	150369	7.49
34	All India	1210569573	15183709	12189854	103219	82269	7.1

Source: (i) Economic and Statistical Organisation, Punjab
(ii) Central Statistical Organisation, New Delhi

plains constituting the remaining 30 per cent of area hold about 70 per cent of its population. The region's accessibility has always remained weak due to geographical reasons and underdeveloped transport links with

the rest of India. Also, as the region witnesses floods and landslides in the Brahmaputra and Barak Valleys of Assam, considerable strain is exerted on the economy of not only Assam but other NER states too.

Infrastructural Factors: One of the reasons for the economic backwardness of the North-Eastern states is the poor state of basic infrastructural facilities like roadways, waterways, energy and so on as well as social infrastructure



like educational institutions, health facilities etc. NER has about 6 per cent of the national roads and about 13 per cent of the national highways. However, their quality is not good due to poor maintenance. The prominent indicators of shortfalls in infrastructure in this region are: increasingly congested roads, power failures, shortage of drinking water etc.

Constraints on Industrial Growth: At the time of Independence, there was a small but significant industrial sector in Assam which was mostly dominated by the colonial capitalists. This sector consisted of plantation and manufacturing of tea, mining of coal and oil, oil refinery, manufacturing of plywood and other forest resource-based products. Post Independence, due to the partition of India, the industrial sector in Assam received a serious set-back as its trade routes were cut-off from the rest of India. This, in turn, hindered economic integration with other parts and also reduced the attractiveness of the region as a destination of investment. The main strength of the region for industrial development comes from its huge natural resource base. For instance, the setting up of National Hydro-Electric Power Corporation to harness the huge hydro-electric potential of the region

and Gas Authority of India Limited (GAIL) and Oil and Natural Gas Corporation (ONGC) for exploration and extraction of oil and gas reserves. The forest based industrial units have been on decline following the ban on felling of trees, by the Supreme Court in 1995. Besides, dearth of local capital, marketing and transport bottlenecks hinder the industrial development of this region. Tea industry is one of the oldest industries in India. Started well in the beginning of the 20th century, tea established itself as a major manufacturing industry in Assam that heralded a huge potential. One of the major problems facing the tea industry, especially in Assam has been the increased conflict between the mainstream Assamese and the labourers regarding their health issues and welfare benefits.

Agriculture: Despite agriculture being the major subsistence occupation of the tribal population here, the pattern of agricultural growth has been uneven across states and between crops. Rice is the major crop of the region (kharif). Other crops (rabi) grown in the region are wheat, potato, sugarcane, pulses and oilseeds. The NER produces only 1.5 per cent of the country's total food grains and provides livelihood support to 70 per cent of the population. The

pace of agricultural growth in the eastern and North-Eastern regions has been slower than the rest of the country. The Green Revolution was largely limited to the North-Western parts of the country and has not benefited the North-Eastern region. By and large, the production conditions in agriculture in the North-East are traditional. The agricultural productivity is the lowest, irrigation facilities are almost non-existent in some areas and consumption of fertilisers is extremely low. One of the most common agricultural practices in the North-East is shifting or "Jhum" cultivation. Approximately 1.7 million hectares of land is under it which leads to a large scale deforestation resulting in soil erosion and loss of soil fertility.

Natural Resource Base: In spite of having a reservoir of natural resources- soil, water, vegetation and hydrocarbons, the NER is underdeveloped because the resources are being indiscriminately exploited and mismanaged, thereby leading to depletion of the very assets that are usually highlighted as triggering the greatest potential for growth and development of the NER. Also the biodiversity of the region is under severe threat. The bulk of natural resource degradation is being caused



by coal mining, fertiliser, paper, cement industry etc. and militant activities.

Transport and Communication:

The road development in the region has been very slow due to various geographical and socio-economic reasons. During the Five Year Plans, the allocated funds for development of the transport sector in the Northeast were not adequate in comparison to its needs. Inadequate transport facility has been a serious drawback that crippled the development of the region for a long time. As a result of the partition, the region suffered not only economically in the form of relatively high prices of consumer goods but also by a sense of isolation from the rest of the country. Moreover, the railway network is only 4 per cent of India's rail network. The entire network in east of New Bongaigaon was in meter gauge and the problems that were faced included not only insufficient railway network but also the hurdle caused by the change of gauge. The region also faced serious problems in transporting essential commodities like cement, steel, food grains, salt, etc.

Another gigantic challenge of NER today is **globalization**. With India's 'Act East' policy which heralded the

tectonic shift of India's west oriented stance towards east-oriented posture, it is extremely difficult for the NER to successfully compete with the MNCs and foreign entrepreneurs in business and trade.

Social Dis-organisation of the region is also a matter of concern. A society that has insufficient productive forces, makes its members capability-poor and a capability-poor society is also poor in cultural capital and if the standard of living of such a society is much higher than what its productive forces can afford, then such a society's economic condition creates moral degeneration and consequently loss of character.

Education system, having miserably failed here, the well-to-do families send their children to some mainland cities for further education which gives a big economic blow to the local society. This brain-drain, attributable to the Policy Paralysis of the region needs to be addressed.

Another culprit here is, Substance Addiction. It is generally accepted that, more than 30 per cent of its youth are narcotic drug abusers. In league with this, the pandemic of HIV/AIDS, spreading fast in Manipur, Nagaland

and Mizoram, is a matter of grave concern.

With a view to give an undivided attention to the development of the region, in 1971, the Government of India set up the North Eastern Council. All the 8 states are its members. With head quarters in Shillong, it functions under the Ministry of Development of North Eastern Region (MDoNER). The council, initially set up as an advisory body, now has been sanctioned as a regional planning body since 2002. They now discuss any matter in which the North Eastern States have a common interest and decide the action to be taken on any such matter. The North Eastern Development Finance Corporation Ltd. (NEDFCL) is a Public Limited Company providing assistance to micro, small, medium and large enterprises within the NER. Other organisations under MDoNER include North Eastern Regional Agricultural Marketing Corporation Limited (NERAMAC), Sikkim Mining Corporation Limited (SMC) and North Eastern Handlooms and Handicrafts Development Corporation (NEHDC).

The Ministry for Development of North Eastern Region established in September 2001, which functions as the nodal Department of

the Central Government to deal with matters related to the socio-economic development of the eight States of NE, acts as a facilitator between the Central Ministries/ Departments and the State Governments of the North Eastern Region in the matters of economic development including removal of infrastructural bottlenecks, provision of basic minimum services, creating an environment for private investment and removing the impediments to lasting peace and security in the region.

Coming to the developmental initiatives taken by the Central Government recently in December 2017, the centre has approved North East Special Infrastructure Development Scheme which will fill the gaps in creation of infrastructure in two sectors- One is physical infrastructure relating to water supply, power, connectivity and especially projects promoting tourism. The other is social sector projects of education and health. The remarkable feature of this scheme is that this is a 100 per cent centrally funded scheme as against the NLCPR, where 10 per cent contribution had to come from the State Governments. The Government of India will be providing Rs 5300 crore to NE States under the Scheme over the next three years. In addition, Tuirial Hydro-power project is the first major Central Sector Project to be successfully commissioned in Mizoram. It will produce 251 Million Units of electrical energy every year and boost the socio-economic development of the State. With this, Mizoram becomes the third power-surplus State in the NER after Sikkim and Tripura. The fact that, despite fiscal constraints, the sharing pattern of core centrally sponsored schemes for North Eastern States has been continued at proportion of 90-10, itself shows the concern of the present Government for NE states. Moreover, it has sanctioned over 3800 kms of National Highways with an investment of Rs. 32000 crore during the last three years, out of which nearly 1200 kms of road has already been constructed.

With an objective to bring all the State Capitals of NE on the Rail Map,

the union government will be investing another Rs 60,000 crore under Special Accelerated Road Development Programme in the North-East and Rs. 30,000 crore under Bharatmala in the next two to three years to build a network of high-ways and roads in the region. Proactively following the 'Act East Policy', some of the major initiatives include the Kaladan Multi Modal Transit Transport Project, the Rih-Tedim Road Project and Border Haats. The Union Government has sanctioned two tourism projects worth Rs. 194 crore for Mizoram in the last 2 years, to promote eco-tourism and adventure tourism, out of which Rs. 115 crore has already been released for implementation of these projects.

Keeping in view the fact that Bamboo is a source of livelihood for lakhs of people of NE region, Government has recently relaxed its restrictive regulatory regime. Now there will be no requirement of any permit for producing, transporting and selling Bamboo products. This will benefit lakhs of farmers and will add to the efforts to doubling farmers' income by 2022.

If we look at the latest budget (2018-19), the Government has allocated Rs. 1014.09 crore (nearly 5 times of last year's allocation) for revival of 50 airports and improving aviation infrastructure. These include strategic airports like Pakyong in Sikkim, Tezu in Arunachal Pradesh etc., where civilian air connectivity will be provided for the first time. It is hoped that all these efforts will increase the scope for economic linkages, and contribute to the overall economic growth and development of the North-Eastern Region.

Way-Forward:

A six-fold strategy for the comprehensive development of the region has been proposed-

- Empowering people by maximizing self-governance and participatory development through grass-root planning to promote inclusive development.

- Creation of development opportunities for the rural areas through enhancing productivity in agriculture and allied activities such as animal husbandry, horticulture, floriculture, fisheries and generation of livelihood options through rural non-farm employment.
- To develop sectors in the region having a comparative advantage such as agro-processing, hydro-power generation.
- Enhancing the skills and competencies of the people and building the capacities for institutions within the Government and outside.
- Creating a hospitable investment climate to encourage investment by the private sector particularly for infrastructure.
- Harnessing the resources of the Government and the private sector to realize the objectives of the Vision.

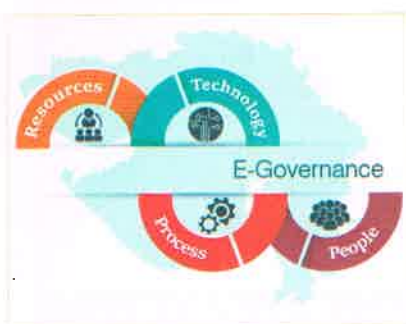
The latest event of Global Investors' Summit in Guwahati held on February 3, 2018, itself evinces the sincere approach of the Central Government towards bringing overall prosperity in the NER. The event undoubtedly, showcased the states' investment potential to countries in South and South East Asia, in sectors including manufacturing, services, power, agriculture and food processing, IT, transportation, petrochemicals, pharmaceuticals, textiles and handicrafts and tourism.

To conclude, innovation, initiatives, ideas and implementation-all the four need to go together. What is needed is inclusive growth through inclusive development with focus on improved governance, doing away with the draconian laws and ensuring that the local communities are empowered to implement basic needs and services. For this, all the stakeholders need to formulate an all-comprehensive realistic plan for the overall development of NE states. □

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Governance Challenges in the North East

Naresh Chandra Saxena



With tightly set targets, clear outcomes, strategies, and coordinated planning for the region as a whole, the North East can be revitalized to become increasingly self-sufficient and a net positive contributor to the national exchequer and the country's economy. Initiating the process is the imperative requirement

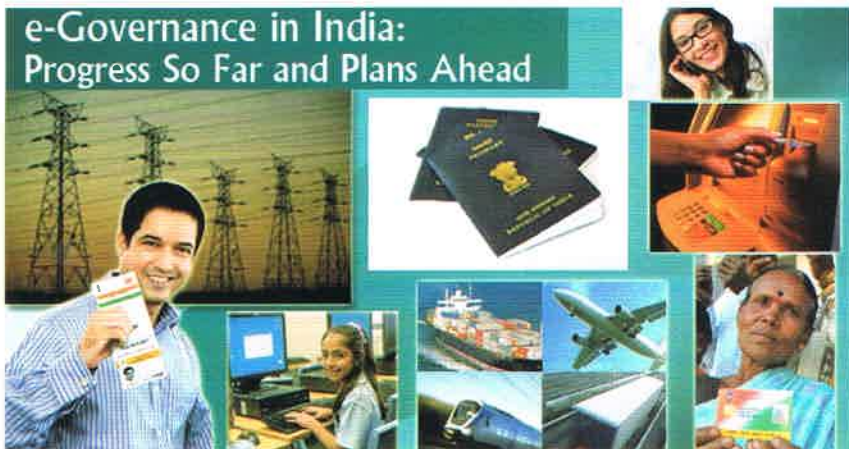
The North-East Region (NER) is one of the backward regions of India characterized by low per-capita income, lack of private investment, low capital formation, inadequate infrastructure facilities, geographical isolation, and inadequate exploitation of natural resources like minerals, hydro power potential, and forests. Its own tax collection and internal resources are quite meagre rendering the region totally dependent on central devolution. The local moneyed people prefer to invest in landed property and shy from setting up enterprises which are perceived as risky ventures. The peripheral locations of the states, the terrain and inadequate infrastructure have impeded the growth of industry.

Except for Sikkim and Tripura, and to some extent Mizoram, other states have not done well in improving their economic growth as shown in Table 1. Upto the beginning of 1970s Assam was one of the better-off states in India. However, the state did not do very well in the next four decades and started slipping on all indicators. Since Assam accounts for almost 70 per cent of NER population, and has been a laggard state on almost all development indicators, it has pulled down the overall performance of the region.

Though government of India has to pay more attention to the north-east, one cannot escape from the harsh reality that the states too have to gear up their administration. Inclusive development must aim at economic growth with elimination of poverty, improvement in social indicators, and reduction in inequality as equally important goals, while ensuring at the same time that there is no damage to the environment. However, translating these macro-policies into action in the northeast would need good governance and accountable administration, without which even the best policies and laws remain on paper only, or result in leakages. Unfortunately governance in the NER at the state and district levels is quite weak, manifesting itself in non-utilisation of funds, lack of supervision, and poor outcomes. These are the key factors impinging on development and social indicators that need to be reckoned with. Some examples are given below.

Fund Utilisation - As is well known, all non-exempt Union Ministries are required to mandatorily earmark 10 per cent of their Gross Budgetary Allocation (GBA) annually for the North Eastern Region. The unspent balances are transferred as Non-Lapsable Central Pool of Resources (NLCPR). While some projects are implemented on time, the other projects get delayed

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because funds are not transferred to them on time, the utilization capacity of these states is poor, and the works are hampered due to the short working season.

The website of Ministry of Development of North Eastern Region (DoNER) shows that cumulative accrual in NLCPR since 2000 to 2010 was Rs 17,213 crores, but releases upto 2011 were only Rs 8,796 crores, that is just 50 percent. It could be because the states are not able to send good proposals to the administrative Ministry. In NREGA the expenditure during 2016-17 in Assam and Manipur (the two most poor states in NE) was only Rs 1630 and Rs. 4953 per rural poor, as against Rs 15657 in Kerala and Rs.11942 in Andhra Pradesh (including Telangana).

Many external projects funded by ADB and the World Bank in NER are languishing for want of completion of various formalities, with the result that

overall expenditure has not picked up in those projects. Similar is the fate of Railway projects. States are not able to expedite land transfer or grant Forest Clearance for Project Land. In a Lok Sabha unstarred question answered on 22.07.2015 the DoNER Ministry admitted that the delays are mainly due to time lag between release of funds and sanction of the projects, non-submission of utilisation certificates in time by the State Governments, problems related to land acquisition and forest clearance, prevailing law and order situation and limited working season due to high rainfall.

According to a CAG report (1 of 2015) on sanitation programme in Manipur the process of planning was devoid of comprehensive assessment of the needs/requirement of rural beneficiaries. Reliable baseline data was not available. There was no community participation in the preparation of PIPs (Project Implementation Plan).

Table 1: Per capita NSDP of the NE states at constant 2004-05 prices¹

	2005-06	2015-16	Annual growth rate 2005-16
Arunachal Pradesh	26870	39107	3.82
Assam	17050	26413	4.47
Manipur	19479	26301	3.05
Meghalaya	25642	38601	4.18
Mizoram	25826	44773	5.66
Nagaland	33072	50327	4.29
Sikkim	29008	92328	12.27
Tripura	25688	55322	7.97
India	28639	52833	6.32

Financial management was inefficient which resulted in delays in release of funds, short release of State's matching contribution, retention of huge balances and leakage of funds through inadmissible payments and avoidable expenditure. There were neither norms for assessment/identification of beneficiaries nor for upkeep of the toilets by them.

Improve M&E Systems - At present, officials at all levels spend a great deal of time in collecting and submitting information, but these are not used for taking corrective and remedial action or for analysis, but only for forwarding to a higher level, or for answering Assembly Questions. The data collected are not normally subjected to any regular checks. There is a failure of the departments in verification of their correctness and almost total absence of accountability procedures.

For instance, according to the state governments the percentage of severely malnourished children in the north-eastern states is much less than 1 per cent, whereas independent verification by UNICEF in 2014 has reported a much higher figure varying from 3.5 per cent in Manipur to almost 16 per cent in Meghalaya and Tripura.

There is urgent need to reconcile the two sets of figures. Process reforms are needed so that field data is authentic, reliable and tallies with the evaluated data. It appears that state governments actively encourage reporting of inflated figures from the districts, which renders monitoring ineffective and accountability meaningless.

Promote e-Governance - 'e-Governance' is the use of Information and Communication Technologies (ICT) to transform government by making it more accessible, effective and accountable. e-Governance utilizes technology to accomplish reform by fostering transparency, eliminating distance and other divides, and empowering people to participate in the political processes that affect their lives. While e-Governance has great potential to bring benefits to all citizens, knowledge about e-Governance is

Table 2: per cent of severely underweight children: Government data (March 2014) vs UNICEF findings

	As per government data	As per UNICEF
Arunachal Pradesh	0.00	13.30
Assam	0.86	7.00
Manipur	0.02	3.50
Meghalaya	0.14	16.00
Mizoram	0.31	6.20
Nagaland	0.20	7.90
Sikkim	0.07	6.50
Tripura	0.25	16.80
India	1.61	9.40

<http://icds-wcd.nic.in/Qpr0314forwebsite23092014/qpr0314nutritionalstatusofchildren.pdf>

mostly restricted to educated and professional groups. Most citizens are still unaware of the potential benefits.

A World Bank report on Assam observed in 2014 that there was absence of a comprehensive ICT Plan, and there was no common framework for service delivery, including a strong and supporting ICT infrastructure. A common ICT Plan could be developed addressing legacy issues, infrastructure bottlenecks, horizontal connectivity, wide area networks and data centers, ICT strengthening, standards and interoperability; and future growth and scalability model in terms of technologies and usage. Each Department should be required to make an ICT Plan covering the services, back-end requirements, requirements of horizontal connectivity, capacities and could be encouraged to adopt from a central bouquet of applications that would help in improved efficiencies and better accountability.

Similarly, the 10th Common Review Mission (2017) on the progress of National Health Mission on Nagaland found that IT Infrastructure for Health was poor. No telemedicine or m-Health initiatives have been rolled out in the state. No work plan based on RCH (Reproductive and Child Health) registers has ever been generated in the state. Inventory management is not computerized and tracking of beneficiaries by ANM is poor. Available IT infrastructure is not used owing to difficult terrain, lack of physical connectivity and poor network of phone and internet. As accounts are

not sufficiently computerised, there was a backlog of more than a year in payments of commission to ASHA workers in Dhalai district of Tripura.

Whereas many states in India have benefited from end-to-end computerisation in the distribution of foodgrains through Targeted Public Distribution System (TPDS), a comparative study of TPDS in six states, viz., Assam, Bihar, Chhattisgarh, Karnataka, Uttar Pradesh and West Bengal sponsored by the Ministry (Evaluation Study of Targeted Public Distribution System in Selected States, NCAER September, 2015) revealed the following:

- Chhattisgarh had the lowest exclusion error at 2 percent of all households eligible for benefits, while Assam had the highest at 71 percent.
- Leakage is found to be the lowest in Chhattisgarh, followed by Bihar. It is comparatively high in Assam, Uttar Pradesh and West Bengal.
- Vigilance and monitoring is extremely low in Assam.
- In Assam, people have paid as much as Rs 3,000 to get a BPL card. This cost is negligible in Chhattisgarh.
- In Cachar and Bongaigaon cardholders never get their full quota of grain because FPS dealers deduct 3–4 kg per card. The dealers admitted this was true; they justified this deduction as

the cost of transport was never reimbursed by government.

Redundant Bureaucracy - Whereas some of the governance deficits discussed above are common to many states, there are two specific constraints in the NE. One, the non-plan expenditure of NE states is quite high due to huge presence of group C and D staff, such as clerks, peons, etc who are not needed now. Because of this the NE states end up with having insufficient funds for plan expenditure, despite liberal central devolution. For instance, Assam's per capita plan outlay for 2014-15 was Rs 5,775, whereas with similar poor population Chhattisgarh's plan outlay was Rs 12,807, primarily because of heavy salary burden in Assam. The two states are compared below.

Table 3: Assam vs Chhattisgarh

	Assam	Chhattisgarh
Area (000 sq km)	135	78.4
Population (crores)	3.12	2.55
per cent below poverty line (2011-12)	32 per cent	40 per cent
Finance Commission devolution in 2015-16 in crore Rs	17,401	13,490
Plan outlay 2014-15 cr Rs	18,000	32,710
per capita plan outlay for 2014-15	5,775	12,807
No. of government employees in thousand	316	122

Thus, public administration in NE States is marked by a number of dysfunctional staff that contribute to inefficiencies in public administration epitomised by endemic overstaffing of support staff, resulting from poor staffing norms, and accompanied by unsustainable wage bills. More than the absolute number of government servants, it is the skill mix which is highly skewed in favour of unproductive and irrelevant staff of

clerks, peons, and drivers. At the same time, shortages continue in key social sectors of frontline staff, such as nurses, doctors, teachers, judges, and even policemen. A combination of misaligned organizational structures marked by overlap and duplication of functions across and within departments, poorly structured systems and processes, poor human resource management, and inadequate incentives has weakened administrative capacity to efficiently carry out core government functions.

The other problem peculiar to the NER is the culture of 'bandhs' (state closure) widely prevalent in Assam, Manipur and Nagaland that goes against the notion of individual rights. It is a stigma on the effectiveness of local governance structures, and is unconstitutional to say the least. 'Bandhs' in Assam have a rippling effect all over the Northeast as most basic commodities like rice, pulses, medicines, vegetables, poultry, etc., reach the other states via Assam either by road or by rail. The time has therefore come for citizens of Assam, Manipur and Nagaland to stand up against the negative culture of 'bandhs' issued by armed groups who invariably represent only themselves,

and hold their state governments accountable for poor governance, in order to enable their future generations to have a progressive and peaceful life².

To significantly reduce, let alone eliminate within the next decade or so, the growing gap between growth rates in the country as a whole and much of the North Eastern Region calls for a massive improvement in delivery and governance, and not only increase in the flow of financial resources to the Region. It is no longer the availability of financial resources but the capacity of institutions and individuals in the North East to make effective use of available resources that is proving the critical constraint to growth. To combat this, every effort needs to be made to induct technical support from all over the country, as well as from within the North Eastern Region, into all levels of governance. Institution-building calls for strengthening State departments and agencies, as well as promoting fruitful partnerships between civil society and State Governments. Strengthening of institutions of local self-government is particularly important. It is in these areas that government of India may like to concentrate in future.

With tightly set targets, clear outcomes, strategies, and coordinated planning for the region as a whole, the North East can be revitalized to become increasingly self-sufficient and a net positive contributor to the national exchequer and the country's economy. Initiating the process is the imperative requirement. Good governance calls for probity, transparency and accountability. This is a matter of both ethics and governance systems. Effective devolution, reinforced by social audit, will considerably strengthen monitoring and vigilance at the grassroots level and, hopefully, gradually impact higher echelons of governance. Equally, the importance of capacity building and institution-building cannot be over-emphasized.

Endnote

- 1 http://mospi.nic.in/sites/default/files/press_releases_statements/State_wise_SDP_31_03_2017.xls
- 2 https://idsa.in/idsacomments/The_Culture_of_Bandhs_and_the_Absence_of_Local_Governance_in_the_Northeast_ngoswami_251110. □

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A 24 x 7 National Toll Free Drug De-addiction Helpline Number

The Ministry of Social Justice and Empowerment is undertaking a National level Survey in collaboration with National Drug Dependence Treatment Centre, AIIMS, New Delhi. The survey will provide national and state-level estimates of proportion and an absolute number of individuals using various drugs and suffering from substance use disorders.

The last National Survey on the extent, pattern and trend of drug abuse was sponsored by Ministry of Social Justice and Empowerment and conducted by the United Nations Office on Drugs and Crime in the year 2000-2001. The report was published in 2004. The Survey estimated that about 7.32 Crore persons in India were users of alcohol and drugs. Of this 87 lakh used Cannabis, 20 lakh used opiates and 6.25 Crore were users of Alcohol. The survey covered 40,697 individuals. Only males within the age group of 12-60 years were part of the Survey. National Institute of Social Defence (NISD), an autonomous organization under this Ministry, conducts capacity building programmes, sensitization and preventive education programmes in schools and colleges on regular basis. During the year 2016-17, they conducted 54 capacity building and skill development programmes imparting training to 1332 persons. During the year 2016-17, they have also conducted 207 awareness generation programme covering 15516 beneficiaries.

The Ministry also uses print, electronic and social media for creating awareness. Information regarding ill-effects of alcoholism and drug abuse is also disseminated in regional languages through the All India Radio programme "Sanwanti Jayen Jeevan Ki Rahen" and also through advertisements in newspapers.

The Ministry has set up a National Toll-Free Drug De-addiction Helpline Number 1800-11-0031 w.e.f. January 7, 2015 to help the victims of drug abuse, their family and society at large.

This information was given by Minister of State for Social Justice and Empowerment Shri Vijay Sampla in a written reply in Lok Sabha March 13, 2018.

Providing World Class Logistics

*Sasikala Pushpa
B Ramaswamy*



...it has become imperative for the IR to undertake a concerted effort at improving passenger amenities, decentralizing decision making, fast-tracking projects of national importance, adopting uniform accounting standards and ensuring better delivery of services in order to drive the growth of the economy and also improve its financial health as suggested by various committee reports submitted recently and in the past

The Indian Railways (IR), a 162-year-old national asset has the distinction of being the second largest railway system in Asia and the fourth largest railway system in the world, operating more than 19,000 trains and 7,112 stations. Indian Railways plays a critical role in facilitating the economic and social development of the country by enabling geographic connectivity, citizen mobility and commercial activity, in addition to providing a world-class logistics and transportation infrastructure. Indian Railways is the fifth biggest rail network in the world with 1.3 million employees and it is a massive task to streamline its operations.

Railway Ministry is trying to restructure the Railways to make it more efficient—from upgrading the quality of coaches, adding Wi-Fi, running special trains like super luxury Tejas and modern Deen Dayalu unreserved coaches to reducing costs, speeding up project execution, and dreaming up new ways of raising finances. But Indian Railways still faces a lot of challenges.

Budget Allocations

Government has allocated capital expenditure of Rs 1,48,528 crore for

the Indian Railways for 2018-19; all trains to be progressively provided with WiFi, CCTV and other state-of-the-art amenities; all railways stations with more than 25,000 foot fall to have escalators; 12,000 wagons, 5160 coaches and 700 locomotives being procured; focus will be on safety, maintenance of railway tracks, increase in use of technology and fog safety devices.

Redevelopment of 600 major railway stations has been taken up; Rs 17,000 crore is being set aside for the Bengaluru Metro and Rs 11,000 crore is being allocated for the Mumbai suburban railways; an institute is coming up in Vadodara to train the manpower required for the high speed railway projects; 36,000-km of rail track renewal is targeted in the coming year; government to eliminate 4267 unmanned rail crossing in broad gauge in 2 years; 4000 kilometers of electrified railway network is slated for commissioning during 2017-18; work on Eastern and Western dedicated Freight Corridors is in full swing.

Challenges

Although the development of railways in our country took place rapidly, still there are numerous problems in the path of steady growth. The main problems are stated as under:

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B. Ramaswamy is Former Pro-Vice Chancellor at APG Shimla University and Legal Adviser to Member of Parliament.

Slow Pace of Expansion and Modernization

While the passenger traffic and number of routes operated by the IR has increased significantly since its inception, the corresponding growth in infrastructure is inadequate. In fact, the Indian Railways (IR) has added only 10,000 route-kms since Independence while China has added more than 50,000 route kms in the same period.

Additionally, the share of double/multiple track as a percentage of total route kms has grown by only 52 percent over the past 3 decades and today only 30.32 percent of the route kms have double/multiple tracks. Owing to the slow pace of expansion, the current infrastructure has reached a saturation point and today, almost 40 percent of the 1219 sections operated by the IR are running at more than 100 percent line capacity utilization.

Railway Accidents

The incidence of railway accidents in our country is greater as compared to other countries of the world. Accidents occur due to the errors and negligence of the employees.

Travel without Tickets

Another problem that is being faced in India is that a large number of passengers travel without purchasing tickets. Indian railways have to bear extra loss of about Rs. 5 crore every year on account of travelling without tickets.

Fiscal Problems:

The working of Indian Railways is caught up between making it a self-sufficient organization and serving as a transport system for the poor. The result being no rise in passenger fares and new trains and routes being decided on non-commercial reasons.

The passenger fares usually remain static for years, burdening the Union Budget. In order to keep finances in check, freight charges have been raised in the past. But the discrepancy

between freight charges and passenger fares seem to distort the Railways' performance.

The recent decision of surge pricing of tickets in premium trains is a move in a right direction. But the biggest headache for Railways is expansion of their freight basket.

Operating Efficiency

Indian railways has a huge employee base of 1.3 million, which includes powerful workers' unions. It has become a centralised organization with hierarchical decision-making. As a result, even simple decisions take years to resolve.

Operating ratios are likely to get worse as costs pile up, including money for the 7th Pay Commission recommendations which is nearly Rs 28,000 crore this year to retirees and serving employees of Railways.

Finances and Accounting

Indian Railways spends heavily on revenue expenditure - there is little left for capital expenditure.

Indian Railways need to generate enough funds on its own for capital expenditure and also find new, non-government sources of funding in order to witness a noticeable change.

But that can only happen if Railways is run as an efficient corporation with a healthy balance sheet that can be leveraged to raise debt. The ministry is also looking at taking the investments in Railways to Rs 8.56 lakh crore by 2019.

Old Track and Poor State of Rolling Stock

Another major problem faced by Indian railways is that the tracks are old and outdated. These old tracks cause many serious railway accidents. This has also resulted in speed restrictions. Virtually, in every new timetable, running time of all trains has been increased while railways in other advanced countries are reducing it drastically.

Lack of Modern Management

There is a lack of modern management as railways failed to attract adequate incentives and suitable talent. In addition to it, it could not make economic analysis for perspective planning tariff.

Outmoded Technology

The rolling stock technology is absolutely outmoded. The system is beset with excessive man-power and manpower development has not kept pace with technology up-gradation. This has made railways incapable of coping with increasing transport demands and of raising and improving the traffic volume and flows at lower unit cost of operation.

Problem of Replacement

The problem of replacement of old and obsolete railways engines, wagons and other equipment has created a serious problem in India.

Problem of Laying Double Lines

Most of the railway lines are single lines which create great inconvenience to the railway organization and passengers.

Inadequate Investment

The railway transport has lagged behind the requirement due to inadequate investment. The shortcoming has been highlighted by different committees, like the National Transport Policy Committee, the Rail Tariff Enquiry Committee and the Railway Reforms Committee.

Competition with Road Transport

The competition with road transport is growing in intensity, both in passenger and in goods transport. The lack of coordination between railways and road transport has lowered the earning capacity of the railways. This has further caused delay in traffic movement and inconvenience to passengers.

India's railway network is recognised as one of the largest railway systems in the world under single management.

Market Size

During April-November 2017, the passenger traffic of Indian Railways grew 0.68 per cent to 5,543.15 million.

The overall revenue of Indian Railways grew 5.68 per cent year-on-year to Rs 109,209.15 crore (US\$ 16.87 billion) during April-November 2017.

The passenger earnings grew 5.24 per cent to Rs 32,370.54 crore (US\$ 5 billion) and the freight earnings grew 8.01 per cent to Rs 71,168.67 crore (US\$ 10.99 billion) during the same period.

Investments/Developments

Foreign Direct Investment (FDI) inflows into Railways related components from April 2000 to September 2017 were US\$ 896.99 million.

Following are some of the major investments and developments in India's railways sector:

A plan for redevelopment of Surat's railway station will soon be announced requiring a total expenditure of Rs 4,650 crore (US\$ 715.12 million).

The Indian Railways is planning to invest around Rs 3,000 crore (US\$ 461.08 million) to convert 40 out of its 100 yards into smart yards and end manual inspections.

The Indian Railway network is growing at a healthy rate. In the next five years, the Indian railway market will be the third largest, accounting for 10 per cent of the global market. Indian Railways, which is one of the country's biggest employers, can generate one million jobs, according to Railway Ministry.

In order to develop three new arms of Dedicated Freight Corridor (DFC)

in the various regions of the country, Indian government is planning to invest Rs 3,30,000 crores (\$50.98 billion).

Also, Indian Railways is planning to invest in order to adopt European Train Control Systems (ETCS) which will help in the development of the infrastructural facilities.

Economic Survey: Recommendations

Tariff Rationalisation

In a bid to make rail transportation attractive and arrest the declining trend of rail share, the survey said, various initiatives were taken in FY2017 which includes tariff rationalisation, new policy guideline for station to station rates, withdrawal of dual freight policy for export of iron ore and rationalisation of coal tariff.

The following measures to attract rail traffic by Indian Railways have been listed.

Classification of new commodities; Tariff rationalization; rationalization of coal tariff; Expansion of freight basket through containerization; New policy guideline for station to station rates; Liberalised Automatic Freight Rebate scheme for traffic loaded in empty flow directions; Withdrawal of dual freight policy for export of iron ore; Policy guidelines of Merry Go Round System; Discount for loading of bagged consignment in open and flat wagons; New delivery models like Roll-on Roll-off services; Re-introduction of short lead concession and reduction in minimum distance for charge; Digital payment for freight business and Long Term Tariff Contract Policy (which provides tariff stability and attractive rebate in freight to customers).

Station Redevelopment

According to the Economic Survey 2018, the project of station redevelopment is the "biggest non-fare revenue generating" one. Also, the

commercial development undertaken near the stations will become the nerve centers of the city and provide quality retail, commercial and hospitality development.

Besides, the redeveloped stations will improve passenger experience by providing amenities like digital signage, escalators/elevators, self-ticketing counters, executive lounges, luggage screening machines, walkways, holding areas for passengers, grand and distinctive roofing and flooring, free and paid WiFi etc., the survey adds.

Safety

World Bank Report

Apparently concerned with the increasing number of rail accidents in India recently, the World Bank has pitched in a list of guidelines to the Indian Railways that would help the national transporter avert large-scale of disasters in future.

As a measure to avert accidents, the trains are to be equipped with 'ditch lights' and painted bright yellow that will enable more visibility even during twilight hours; The rail employees should be garbed in "high-visibility" clothes that can be worn round the year. Special heed is to be taken to ensure that they wear it on duty at all times. The footwear and helmets are to be chosen by the employees that stay well within the allowance's range and serve the purpose; Every train must be equipped with fire extinguishers and the staff must be well guided on various fire prevention measures.

The level crossings and paths are to be painted with a crosshatched pattern that can alert and highlight the dangers for people in the area; The investigators who have been assigned to investigate root-cause of accidents are to be trained for better analysis; The authorities have been suggested to review timetables such that a maintenance block of four hours is provided weekly on all main lines as

SPECIAL LOOK ON

“ BUDGET 2018-NORTH EASTERN STATES DEVELOPMENT-OVER ALL VIEW ”

Total Allocations:

- The total budgetary allocation for the region for 2018-19 is Rs 47,994.88 crore, up from Rs 40,971.69 crore in 2017-18. Significantly, this increase of Rs 7,023.19 crore is the highest since the country's independence.
- Apart from this, the Development of North Eastern Region (DoNER) Ministry's budget has also been hiked from Rs 2,737 crore (in 2017-18) to Rs 3,060 crore (2018-19).



- The direct grants-in-aid to the North Eastern states has also increased from Rs 1,449.83 crore to Rs 1,638.27 crore in this budget.
- Capital outlay for the region has gone up to Rs 700 crore from Rs 420 crore.
- The North East region has received a substantial budgetary allocation for infrastructure projects that will boost its connectivity and unlock its economic potential.

Railways:

- A total of 20 major railway projects involving the laying of 13 new rail lines, gauge conversions, laying double tracks and construction of other paraphernalia like new stations and expansion of existing ones have been sanctioned.
- Arunachal Pradesh will be a major beneficiary with three new rail lines being extended to the Indo-China border through steep mountainous and treacherous terrain.
- All the states will soon be connected with rail lines, something that could not even be imagined till 2014.
- The government has committed a whopping Rs 5,886 crore over the past four years for rail connectivity in the region and this figure is expected to rise to Rs 40,000 crore (including investments from Japan and by private players) by 2019.
- 970 kms. gauge conversion have been completed in NE region in the last 3 years. Thus, all operational MG sections have been converted to BG and there is no MG operation in entire North East Region.
- Agartala-Akhaura (Bangladesh) rail link supported by MDoNER is at processing stage.

Bamboo:

- Bamboo is essentially a type of grass, but its classification as a tree for 90 years prevented the northeast, which grows 67 per cent of India's bamboo, from exploiting it commercially unlike China, the only country with richer bamboo genetic resources.
- Now Budget 2018 has ignited farm hope for the grass which once fuelled insurgency in the northeastern States.
- The allocation of Rs. 1,290 crore for a



restructured National Bamboo Mission (NBM) has raised hopes for a range of bamboo-based industries — from food processing to construction.

- The Budget provision is one of the best initiatives to promote holistic development of bamboo.

Aviation:

- The Centre's focus on increasing air connectivity to the Northeast continued in the Union Budget for 2018-19.



Guwahati Airport

- The Finance Ministry announced an allocation of Rs 1,014.09 crore for the upcoming financial year towards revival of 50 airports and viability gap funding for improving aviation infrastructure in the area under the flagship regional connectivity scheme. This amount is nearly five times the allocation of Rs 200.11 crore as per the revised estimates of 2017-18.
- Around 40 per cent, or 129 of the 325 air routes awarded under the second phase of the regional connectivity scheme were for Northeastern and hill states. These include strategic airports such as Kargil in Jammu & Kashmir, Pakyong in Sikkim, and Tezu in Arunachal Pradesh, where civilian air connectivity will be provided for the first time.
- Air connectivity to remote areas of the Northeast will boost tourism and result in greater flow of investments to the region, while also enhancing trade and commerce.

Roadways:



- The emphasis on connectivity by the government will result, by 2019, in about 10,500 kms of new roads in the region having come up since 2014.

- According to the Ministry of Road Transport and Highways the investment in construction of new roads, bridges and related paraphernalia and improving as well as expanding the existing ones in the North East would come to a staggering Rs 2 lakh crore from 2014 till 2019.

- This includes the Rs 40,000-crore, 1,300km-long Express Highway along the Brahmaputra and the Rs 55,000 crore trans-Arunachal Highway projects.

- Under Bharatmala Pariyojana, 5301 kms in NER have been approved for improvement. Out of this, 3246 kms of roadways is for development of the Economic Corridor in the North East.
- 9.15-kms. long Dhola-Sadiya Bridge, India's longest river bridge connecting Assam and Arunachal Pradesh, has been inaugurated.

- Work for India-Myanmar-Thailand Trilateral Highway awarded in December, 2017 is underway.

Power Sector:

- Rs 1,292 crore has been set aside for ongoing power projects in the North East and capital outlay for the power sector has been increased to Rs 267.45 crore. This is in addition to the roughly Rs 54,000 crore that has been invested in various hydro-power projects in the region, especially in Sikkim and Arunachal Pradesh.
- Another Rs 234 crore has been allotted for developing solar power plants in the region over the past two years.



Mizoram:
60-megawatt
Tuirial Hydro
Electric Power
Project to be
commissioned in
October

Shipping/Inland Waterways:

- Development of Barak river is taken up in two phases for shipping and navigation purposes.
- In Phase-I, development of Bhanga–Silchar (71 km) stretch with up gradation of existing terminals at Karimganj and Badarpur is to be taken up.
- Dredging of river Barak in 1st Phase has commenced in November, 2017
- In Phase-II, development of Silchar – Lakhimpur (50 km) stretch with setting up of new terminals at Silchar and Lakhimpur is proposed

Conclusion:

- Budget 2018 provides the proper traction to the ‘Act East’ policy. “Connectivity is the key to unlocking the North East and that is happening.
- Investments to this region, once just a dream, have started trickling in and are expected to turn into a flow within a couple of years.
- Enhanced links between the North East and the rest of India and between the North East and South East Asia will be a game-changer for this region.

well as review safety performance in terminal operations with the intent of recognizing prevailing risks.

An independent rail safety regulator is to be created by the railways to strengthen the powers of commissioner of railway safety and form a safety management system under the Chairman, Railway Board; To address derailments, fires, or any other possible mishaps, an emergency response plan is to be constituted.

Anil Kakodkar Committee Report

The Committee had made 106 recommendations covering

various aspects viz. General Safety Matters, Organizational Structure, Empowerment at Working Level, Safety Related Works and Issues, Filling up of vacancies in critical safety categories and Manpower Planning Issues, Plugging the shortage of critical Safety Spares, External Interferences – Removal of Encroachment and Sabotage, Upgradation of Signaling, Telecommunication and Train Protection System, Upgradation of Rolling Stock, Track, Bridges, Elimination of Level Crossings, Human Resource Development with emphasis on Education and Training Institutes on Indian Railways, Eco-

system and Safety Architectures on Indian Railways.

Of the 106 recommendations, 68 recommendations have been fully accepted, 19 partially accepted and 19 not accepted by the Ministry of Railways. So far, 22 recommendations of the Committee have been implemented. 20 recommendations are in final stages of implementation.

Future Vision

Government support in liquidity crunch; Increased compliance with rail safety procedures like LHB coaches,

ultrasound based rail testing etc are some of the schemes that could be adopted. Other successful models can be studied like the Shinkansen of Japan. Merging of rail and union budget is a welcome step.

Indian Railways faces a stiff challenge in reforming itself back to a star among the exiting PSUs. Reforming the bureaucratic structure into a more open and inclusive structure will lead to quick results to different endeavors by the Indian railways; railway should put a system of online reporting of deviation, also there should be periodic analysis of safety investment made; summary of the findings of major accidents and follow up action taken should be put in public domain.

Existing unhygienic conditions created by direct discharge toilets, which also corrode the rails should be replaced by bio-toilets. Other recommendations by various committees like Bibek Debroy, Anil Kakokar, Sam Pitroda on Removal of Encroachment and Sabotage, Upgradation of Signaling, Telecommunication and Train Protection System, Upgradation of Rolling Stock, Track, Bridges, Elimination of Level Crossings should be considered and acted on immediately.

Conclusion

The Indian Railways has played a critical role in the social and economic development of the country and in ensuring access to cheap and affordable public transport for the masses. Moreover, it has grown significantly and is among the largest railway networks in the world. However, over the past two decades, it has not been able to maintain its position as the prime mover of the nation and concerns have been cast over its ability to provide competitive and cost-efficient transport services for passengers and freight in the country.

As the Bibek Debroy Committee Report pointed out, the supply-side improvements have not been commensurate with demand end requirements, indicated by the slow speed of passenger and goods trains as well as the delay in modernization and expansion of the network.

Therefore, it has become imperative for the IR to undertake a concerted effort at improving passenger amenities, decentralizing decision making, fast-tracking projects of national importance, adopting uniform accounting standards and ensuring better delivery of services in order to drive the growth of the economy and also improve its financial health as suggested by various committee reports submitted recently and in the past. □

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YE-746/3/2017

Bamboo Mission: A Tool for Economic Prosperity

Nirendra Dev



North East India, in effect, grows about 68 per cent of India's bamboo – a substantial rich genetic resource. the Bamboo Mission launched by the Government of India...is a centrally sponsored scheme with 100 per cent funding from the Government of India and in the coordination with states, it seeks to achieve certain objectives like promoting bamboo and bamboo-based handicrafts and generate employment opportunities for skilled and unskilled people-especially unemployed youth

No story of the 'North East India' can be complete without the story of its inherent resilient power. The agricultural management and the traditional systems of cultivation practices form the principal facet of that resilience strength. Agriculture is certainly the mainstay of the people in the region – be it in hills or in valleys. The major positive feature of cultivation in the region is that the traditional practices are well adapted to the environmental conditions and the traditional knowledge of indigenous communities growing rice, cereals and other agricultural crops. In the ultimate - these have enabled the people in these states – fondly called seven sisters - to maintain the requisite ecological balance.

Native people – including Tribals - have been maintaining traditional agricultural practices, agro-biodiversity and indigenous knowledge banks. Generally, farmers practice jhum or shifting agricultural system with other sedentary agricultural practices. The utilization of bio-resources by tribes and other communities is based on the indigenous and traditional knowledge that help in sustainable use.

The local farmers have been using locally adapted major and minor crops in their agricultural systems that help them to survive under risk

prone and hard conditions. The yield and energy efficiency of different agricultural systems depends on the type of crops cultivated. Obviously, as one illustration - the refrain from traditional farmers in the region has been that the more efficient agricultural benefits were found where rice is cultivated with maize or millet.

Various ethnic communities, in general, follow two major types of agricultural practices such as Shifting cultivation and burn agriculture, and secondly the Terrace cultivation. The Terrace cropping is practised in valleys and foothills while the Shifting methodology is practised in and around forests. Here it goes without saying that the Shifting cultivation also popular in the northeast as Jhum cultivation is a primitive practice where vegetative and forest cover on land slopes of hills is cleared by drying and burning it before the onset of monsoon and cropping on it thereafter. Originally, the Jhum cycle worked well. However, with the increase in human population and increasing pressure on land, the Jhum cycle reduced progressively causing the problem of land degradation and even threat to the ecology of the region.

Innovation is the Key

However, the tribal farmers in the northeast can use ingenuity and skill. As a result, they can make optimum use of locally available resources. One

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such methodology is Bench Terrace Irrigation practice. Here, stones and gunny bags are used in an ingenious manner in the maintenance of terraces and to stop soil erosion problems. The hill streams are tapped and the water is channelled to accommodate a series of terraces. In this system, water flows continuously from the upper to lower terraces. This method of irrigation has been found much result-oriented in a non-fertile land – especially for raising rice crops. One key positive aspect of this practice – as told by experts is that the excess runoff from the upper portion of the slope is actually ‘nutrient rich’. Predominantly used for rice cultivation, in the bench terrace, agriculture practice crops like maize, bean and potato are planted on upper slopes. Hence, for obvious reasons, the crop requiring more water such as rice and jute are grown on lower slopes.

Farmers in the northeast – especially in states like Nagaland, Meghalaya and Manipur – have for decades understood the importance of ‘economic returns’ when it comes to hard labour related to agricultural practices. Therefore, the ‘Tree-based farming practice’ too has been encouraged among the indigenous people – where trees are “integrated extensively” in the crop production practice. The focus is also laid on agro-climatic conditions. Under this, local experts say, tree species are raised for food, fibre, medicine and other minor agricultural produce.

The land is used for vegetables, fruits, forest tree species, plantation crops and agricultural crops and it has been found that priorities of multipurpose tree and shrubs in traditional farming practices have been ascertained based on uses and economic returns.

When it comes to sustainable practice and economic reforms, for ages, the northeastern people have been depending on Bamboos.

It goes without stating that Bamboo is virtually an essential component of the forest ecosystem, which is a



dominant feature of the landscape in the northeastern region. Traditional living and lifestyle of tribal and even plain dwellers are, in effect, immensely “dependent” on bamboo for its variety of uses. It will not be wrong to say that the bamboo has much to offer by way of contributing to the socio-economic advancement of the modern society. The eco-friendly Bamboo crop has immense potential in improving rural

economy, industrial development and a sound economic base for the region on a sustained basis.

Green Gold

The Union Budget of 2018-19 rightly calls Bamboo the ‘green gold’.

‘Bamboo’ is essentially a type of grass, but its classification as a tree

National Bamboo Mission Strategy Focus

- Efforts are being made for taking updated technology closer to bamboo growers. Demonstrations are made of planting of different species of bamboo by using different fertilizers and chemicals.
- Encouraging setting up of Bamboo Technology Parks.
- Help create outlets for both wholesale and retail markets
- In rural pockets, bamboo bazaar would be set up.
- Provide guidance for Post harvest storage and treatment facilities
- A few innovative interventions-like Agarbatti sticks for Jail inmates: This project has been initiated at Central Jail under Aizawl District in Mizoram.
- Strategies being evolved to build sustainable bamboo based livelihoods based on a cluster based approach.
- Develop an institutional structure owned and managed by grassroots producers and their federations.
- To make northeast the hub of bamboo based sustainable micro, small and medium industries in the country steps are taken to enable structured growth in the sector by strong institution building and market linkage.
- Sustained long term and short term measures to build the bamboo sector as a major livelihood provider and provide employment opportunities.



bamboo basket, plastered on both the sides with cow dung and mud and this bin has been found to be most effective as a storage structure for storing grains.

Again, in parts of the region, maize is stored in un-husked condition. Sometimes a conical bamboo box is also fixed upside down in the poles to keep the rats away.

Finally, in the ultimate analysis, it is essential to underline that northeastern region's farm activities are also known for organic cultivation. On January 18, 2016, the Prime Minister declared Sikkim as the Organic State of India. In the subsequent period, a Central Sector Scheme namely, Mission Organic Value Chain Development for North Eastern Region was launched for promoting organic farming in the region. In fact, a financial outlay of Rs 400 crore was marked for the period 2015 to 2018. The Government of India also laid attention on increasing the area under organic farming in the country under a programme called the Paramparagat Krishi Vikas Yojana. □

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Despite the fact that the hat and other products have huge export potentials, the market has not been exploited. Encouraging more participation of private players and corporate houses would prove much beneficial to the northeast.

It is interesting to note that bamboo is also found useful to farmers for preparing bins to be used for storehouse purposes.

Bamboo containers of different

sizes, woven tightly and plastered with mud on the inner side are used for storing paddy mainly for consumption and sometimes also for seed purpose. Storing paddy for seed purpose is usually done in a specialized bamboo container commonly called Thiar in Meghalaya. This container is loosely woven with bamboo split into strips. The container is thickly padded inside using rice straw. Similarly, the wooden bin indigenously made by the Khasi tribes of Meghalaya is called Duli. It is a double-layered

North East Special Infrastructure Development Scheme

In December 2017, Government of India approved North East Special Infrastructure Development Scheme (NESIDS) with an outlay of Rs.1600.00 crore for the period of 2017-18 to 2019-20.

The funds under the scheme, will be distributed among eight North Eastern States on the basis of well-defined criteria on certain parameters e.g. Area, Population, Human Development Index, Road density, etc.

The scheme, inter alia, aims to cover the social sectors namely health and education in North Eastern Region.

This was stated by the Union Minister of State (Independent Charge) of the Ministry of Development of North Eastern Region (DoNER), Dr. Jitendra Singh in a written reply to a question in the Lok Sabha on March 14, 2018.



YOJANA

Forthcoming Issue

Nutrition

NORTH EAST DIARY

PM LAUNCHES DEVELOPMENT PROJECTS IN MANIPUR 105TH SESSION OF INDIAN SCIENCE CONGRESS INAUGURATED

The Prime Minister launched development projects worth Rs. 750 crore in Manipur on March 16, 2018. He laid the Foundation Stone of the National Sports University, 1000 Anganwadi Centres, and several other important development projects. He inaugurated the Luwangpokpa Multi-Sports Complex, the Rani Gaidinliu Park, and other important development projects.

Addressing the gathering, the Prime Minister said the National Sports University is being established, keeping in mind the talent and sporting capability of the youth in the North East. He said Manipur has shown how sports can become a means of women empowerment. He appreciated famous sportspersons of the State including Mirabai Chanu and Sarita Devi.



The Prime Minister at an exhibition in Manipur on March 16, 2018.

The Prime Minister also inaugurated the 105th session of the Indian Science Congress at

Manipur University, Imphal. Addressing the inaugural session of the Congress, Prime Minister exhorted scientists to extend their research from "the labs to the land" for the greater benefit of the people and said time was ripe to redefine 'R&D' as research for the development of the nation. He said the scientific social responsibility is need of the hour. The Prime Minister said the real sense of research and development in science and technology is to use it for national development and serving for the welfare of the people. He appealed the scientific community of the world for close co-operation to bring about the effective solution to big problems of science and technology.

NITI FORUM FOR NORTHEAST

The Union Government has issued an order setting up the 'Niti Forum for North-East'. This exclusive forum at the NITI AAYOG will prepare plans for the development of the North East Region and will look at various proposals both at the central and the state levels and prepare plans for the speedy development of the North Eastern Region. The Forum is tasked to identify various constraints on the way of accelerated, inclusive and sustainable economic growth in the North East Region of the country and to recommend suitable interventions for addressing identified constraints. It will also review the development status in the NER.

The forum will be co-chaired by the Vice-Chairman of NITI Aayog and Minister of State (I/C), Ministry of Development of North Eastern Region (DoNER). The forum will have its Secretariat in the Ministry of DoNER. Members of the Forum will include Secretaries of Ministries of Road Transport and Highways, Railways, Power, Water Resources, River Development and Ganga Rejuvenation, New and Renewable Energy, Health and Family Welfare, Human Resource Development, Environment, Forest and Climate Change. Chief Secretaries of Northeastern states of Assam, Sikkim, Nagaland, Meghalaya, Manipur, Tripura, Arunachal Pradesh and Mizoram will also be members of the Forum. Secretary, North East Council (NEC), Shillong will be Member Secretary. Joint Secretary (NE), MHA, besides a number of experts from various fields will also be members of the Forum. The Forum may examine and address any other issues which are of importance but not specifically spelled out in its Terms of Reference. It may devise its own procedure to conduct its business/meetings/fields visits or constitution of Sub-Groups etc.

DEDICATED VENTURE FUND FOR THE NORTH EASTERN REGION (NER)

The Ministry of Development of North Eastern Region has supported North Eastern Development Finance Corporation Ltd (NEDFi) to set up a dedicated Venture Fund for the North Eastern Region (NER) with a corpus of Rs. 100 crore. This was stated by the Union Minister of State for the Development of North Eastern Region Dr Jitendra Singh in a written reply to a question in the Lok Sabha on March 7, 2018. A Committee under the chairmanship of Chief Executive Officer (CEO), NITI Aayog consisting of Secretaries of Ministries/ Departments of Development of North Eastern Region, Expenditure, Commerce, Skill Development and Entrepreneurship, Micro, Small and Medium Enterprises (MSME), Textiles, Tourism, Health and Family Welfare, Power and Industrial Policy and Promotion has suggested a roadmap for a new industrial policy for North Eastern States, after consultation with stakeholders. Some Ministries are also implementing specific Schemes/ Incentives to attract investments in the North Eastern Region. Ministry of Micro, Small and Medium Enterprises is operating a scheme for Promotion of MSMEs in N.E. Region.

A new scheme SAMPADA (Scheme for Agro-Marine Processing and Development of Agro-Processing) is being implemented by the Ministry of Food Processing Industries (MoFPI). Under this scheme, grants-in-aid are provided on more concessional terms for the North Eastern States for setting up Mega Food Parks, Integrated Cold Chain, and Value Addition Infrastructure etc. A specific Scheme called North East BPO Promotion Scheme (NEBPS) for attracting investment is being implemented by the Ministry of Electronics and Information Technology.

INTER-MINISTERIAL COMMITTEE ON MEDICINAL AND AROMATIC PLANTS

An Inter-Ministerial Committee (IMC) on Medicinal and Aromatic Plants (MAPs) has been set up for the North Eastern Region (NER). This was decided after a meeting between Secretaries of DoNER and AYUSH. The IMC is to create synergy in various programmes of the Union Government to enable medicinal and aromatic plants sector to become vibrant and develop the resources to its potential. The IMC will facilitate coordination among Ministries and Departments in various programmes being implemented on conservation, sustainable management and development of MAPs in NER for enhancing the livelihood and economic transformation.

The Ministry of Development of North-East Region (MDoNER) will be the coordinator for the IMC of MAPs. The Committee will review the existing mechanism or institutional arrangements for management and development of MAPs resources of NER. The IMC will identify gaps in the existing mechanism or institutional arrangements, suggest a policy intervention for optimally harnessing the MAPs resources of NER and accelerating the development of MAPs sector, suggest a Plan of Action for the dovetailing of the schemes and programmes of concerned Ministries and Departments. The IMC will also suggest actionable measures for enhancing the livelihood and economic transformation based on cultivation and sustainable management of MAPs resource in North East Region.

The IMC will comprise members from various Ministries, Departments and several organisations in the relevant fields.

J&K WINDOW

COMMITTEE TO CHECK AIR POLLUTION LEVELS IN CHENANI-NASHRI TUNNEL

Committee on Environment (EC) of Jammu and Kashmir Legislative Assembly recommended for a committee to be constituted to check the air pollution levels in Chenani-Nashri Tunnel and the mechanisms being adopted by NHAI, other concerned authorities to regulate the air pollution in the tunnel. The Committee also took up discussions on various pertinent concerns including the status of air pollution in Chenani-Nashri Tunnel besides measures initiated by R&B department while executing road projects in the state.

The Committee also expressed displeasure over lack of action taken on directions and suggestions given by the Committee for minimizing air pollution during their spot visit to Chenani-Nashri Tunnel. The committee directed the concerned authorities to take necessary action in this regard at the earliest. The Committee also directed R&B department to take necessary steps to get NOCs from Forest department so that ongoing road project can be completed in time. They also directed the department to take considerate measures to protect forest areas.

The Committee directed the concerned authorities to expedite construction works on all ongoing road projects including PMGSY in the state to complete the works at the earliest thereby reducing the exposure of common populace to pollutions from constructions sites.

Giving Momentum to Skill Development

Ibu Sanjeeb Garg



As Asian societies like Japan and Korea age faster, there will be a need for skilled workers in these countries. While India can fill this void, its NE region is best placed to fill the gap in these countries. In the light of the above, the status of skill development and subsequent placement of skilled youth in the North East only looks brighter in the future, if the momentum is maintained and newer policies are put in place to tackle new challenges

The economic order of the 21st century has unveiled new economic understanding and a new way of defining economic capital and strength of a nation. One important component of this economic strength is 'demographic dividend' of a nation. The 'demographic dividend' of a nation is defined as the growth potential of the nation that can occur due to the rapid increase in the percentage of working population (15-64 years), in comparison to the total population of the nation. Since the last two decades, while other countries have witnessed a decline in the percentage of working population, in India it continues to rise. Economists across the world have termed this as India's demographic dividend and a key factor in propelling India into a five trillion dollar economy within the next decade.

With this goal in sight, it has become imperative that India prepares its working population so that it can leverage the demographic dividend. It is here that the crucial concept of Skill Development comes to play. The Government of India, as per the Common Norms for Skill Development Schemes notified on July 15, 2015, defines Skill Development, for the purpose of any Government scheme, as any domain specific demand led skill training activity leading to employment or any outcome oriented activity that enables a participant to acquire a Skill, duly assessed and certified by

an independent third party agency, and which enables him/her to get wage/self employment leading to increased earnings, and/or improved working conditions, such as getting formal certification for hitherto informal skills, and/or moving from informal to formal sector jobs or pursue higher education/training. Skill development is imparting training to any individual in a particular sector so that he/she can enter the job market with employment of a status that justifies their knowledge and skill level.

In the last ten years, successive governments have prioritised Skill Development as a key component of economic development. Today, a full-fledged Ministry of Skill Development and Entrepreneurship controls the pace and tenor of skill development in the country while similar nodal structures have been replicated in the state levels as well in the form of State Skill Development Mission (SSDMs).

With Skill Development gaining traction across the country, it is indeed interesting to look at its position in the North Eastern of India as well. In the past few years, North East has found much prominence in the governance paradigm of the country. The rebranding of North East as 'New Engine in New India' is a testimony to the prominence that North East India holds today. The trajectory of Skill Development in the region does not betray this new found focus in the region.

The author is an Indian Revenue Service officer currently posted as Assistant Commissioner of Income Tax, Delhi. He has a special interest in developmental and policy issues pertaining to the North East.



In Arunachal Pradesh, recently the government coordinated with the North Eastern Development Finance Corporation Ltd (NEDFi) in preparing a study which would prepare the groundwork for strengthening the foundation of skill development in the state. The government has given itself an ambitious target of guaranteed jobs for 87,000 youth under the aegis of the Prime Minister Kaushal Vikas Yojana (PMKVY). Further, there is a target to build 4 new ITI's in 2018-2019. The Department of Skill Development and Entrepreneurship has also announced the setting up of 'Rural Skill Development Training Centres' in Public-Private-Partnership (PPP) mode across the state. A unique Skill Development University is in the development stages while the country's first 'Home Stay Skill Development Programme' under PMKVY was launched in Tawang.

In Assam, skill development is imparted through EGM (Employment Generation Mission) as well as Assam State Livelihood Mission and National Urban Livelihood Mission (NULM). These schemes have achieved considerable success in the past few years. In late 2017, it was announced that Employment Centres across the state will be converted into Skill Development Centres. A Skill Development department in Assam has also been set up recently to spearhead the success story of skill development in Assam. The Assam government has set itself an ambitious target of training 3 lakh new entrants in the next few

years. Assam has been one of the first states in the country which has rolled out a unique 'Karaghor Pora Karighor Scheme' which is imparting skill development to jail inmates, for them to be able to contribute meaningfully when they return into mainstream society. Further, the government has partnered with companies like Cisco and Dabur to focus on sectoral skill development programmes, which would undoubtedly reap rich dividends.

Manipur has set up a number of committees that are engaging with varied stakeholders to carry the idea of skill development forward. The Manipur government has recently announced the target of providing 1.5 lakh jobs while targeting one job in each household. Vocational skill training courses have been initiated across 40 colleges in the state. The government has also given special focus to imparting skill development to the tribal women as well as surrendered militants.

The Meghalaya State Skill Development Society has trained 7700 youths in skill development, in its first phase and has ensured their placement too in different industries and sectors. The DDU-GKY (Deen Dayal Upadhyay Grameen Kausalaya Yojana) aims to train rural youths and bring them into the job market. The Meghalaya government has also identified a few key sectors to work on, including Tourism, Automobiles Mechanics, and Housekeeping among others, through this scheme.

Both Mizoram and Nagaland have aligned their skill development schemes and goals within the gambit of broader skill development goals of the country. Tripura has set up a separate State Skill Development Mission in order to give impetus to skill development in the state. Sikkim has inaugurated livelihood schools where skills are imparted to youth in different sectors including training them in arts and crafts. The livelihood schools in Sikkim have been performing consistently well. They have, in fact, given a new lease of life to the arts and crafts industry of the state. The Eduwork Japan Centre of Excellence opened its first Skill Development Centre in Sikkim.

It is clear that skill development in North East has indeed picked up at a rapid pace, yet it is not without challenges. There is, therefore, an urgent need to invent new steps to further sustain and maintain the momentum in achieving the goals of skill development mission. One of the first steps that can be taken would be a comprehensive skill mapping of each state. Skill mapping would encompass the harnessing of traditional knowledge of a particular area and develop it into a skill which can be redesigned as a source of employment. Such skill mapping that focuses on the needs of the catchment area would ensure meaningful employment for the local youth, instead of rapid migration to urban areas.

The Assam government has already rolled out a framework and a map in this regard. For example, BARPETA district in Assam, which is traditionally known for local fireworks and bell metal handicrafts, have ITIs and other institutes in place which impart knowledge on these sectors. The syllabus of such institutes can be reworked to place the traditional domain knowledge and redesign it in such a way that the trained youth are ready for the market sector. At the same time, smaller MSME industries in cluster mode should be encouraged to be developed in such areas. This ecosystem would ensure that skill development reaches its logical end of achieving employment. A similar

model can be developed in Cachar district, known for its pottery and Sital Patti work. Sonitpur district can be developed into a prominent rice milling centre, given its existing experience as well as expertise.

The other North Eastern states could carry out their own skill mapping exercise in order to identify those niche areas where they can develop a strong foothold backed by a traditional knowledge ecosystem or advantages of history or geography. Tripura can harness its immense potential of becoming a rubber giant. The rubber manufactured in Tripura can also be exported to neighbouring countries. With the recent plans to connect North East by railways to the East Asian neighbours, such business models gain more trajectory. Hence, there is an urgent need to develop a strong skill development mechanism to train workers for the rubber industry. Nagaland can focus on tourism centred on the Hornbill Festival which has become a nationwide phenomenon today. The idea of tourism has to move from an overview to a more niche targeted model. For example, Meghalaya can stress on few areas like Sohra, Dawki, and the unexplored Jaintia hills to develop centres of excellence in tourism with a whole support system of food and beverage, hospitality, adventure sports spun around it.

A second measure that can give further impetus to making skill development more meaningful is its integration with the international market by identifying new areas where traditional domain knowledge of these areas can be harnessed to create a market for certain products in neighbouring countries. This model has been replicated by Pran Foods in Bangladesh. The food processing company from Bangladesh has created a niche market for itself in North East by introducing products like Litchi Juice. In the last few years, the company has gained a firm foothold in a large number of areas in the North East. The North East states must take advantage of this cross-border trade as well and eye industries which can deliver products which neighbours



need. For example, the rich tradition of handicrafts in the form of gamoucha (towels) and shawls in the North East, can be utilised to create options for products in the market in neighbouring countries for the same. The Pran Food model of Bangladesh must be utilised as a template to identify areas where North Eastern states can thrust themselves. The North Eastern states must take advantage of close proximity to its East Asian neighbours and derive economic prosperity through the same.

The third measure that can be taken is shifting to outcomes-based approach by adopting the National Skills Qualifications Framework (NSQF) standards. Once this model is adopted it will be able to regularly view the progress of each state and loopholes if any can be plugged as part of continuous exercises.

There is also a need to catch aspirational youth at a young age to prevent a high dropout rate. Vocationalisation of school education is a welcome step in this regard. In order to inculcate entrepreneurial abilities among the NE youth, success stories of inspiring entrepreneurs should be taught at the school level.

It must be remembered that, while the task of skill development is huge, the infrastructure available is finite. The NE States must embark on utilising un-utilised government infrastructure for skill development to effectively

tackle the infrastructure constraints faced by these States. The revised National Policy on Skill Development gives guidance to the question of leveraging the existing infrastructure to its maximum use. The presence of private training providers in the region must also increase, perhaps new ways could be found of linking CSR for companies present in the region and acting as a training provider for that particular sector. Barring Assam, none of the other states have Institutes for Training the Trainers and that is one aspect that the states must focus on, on an urgent basis.

In the last few years, skill development has seen tremendous growth in these states. It has to lead to placements and employment generation as well. However, in the wake of the newfound premium of the economic importance of NE, there is further need for still strengthening skill development in the region. As Asian societies like Japan and Korea age faster, there will be a need for skilled workers in these countries. While India can fill this void, its NE region is best placed to fill the gap in these countries. In the light of the above, the status of skill development and subsequent placement of skilled youth in the North East only looks brighter in the future, if the momentum is maintained and newer policies are put in place to tackle new challenges. □

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Gender Mainstreaming in the North East

Shailendra Chaudhari

Mihin Dollo

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The region presents a complex socio-cultural framework with a unique set of challenges and opportunities in empowering women. The gender empowerment refers to increasing and improving the social, economic, political and legal strength of the women, to ensure equal right to women, and to make them confident enough to claim their rights

North Eastern Region of India is home to more than 250 different ethnic communities with diverse cultural and socio-economic realities. The region presents a complex socio-cultural framework with a unique set of challenges and opportunities in empowering women. The gender empowerment refers to increasing and improving the social, economic, political and legal strength of the women, to ensure equal right to women, and to make them confident enough to claim their rights.

In many respects, gender indicators in North Eastern states compare very favorably with the average Indian situation. This, however, does not convey the whole situation. While performing their day to day functions women face many difficulties than men because of the nature of functions that they perform. Women in the North East have taken on themselves the mantle to take care and feed their children and make their household done hearth burning. This they have not done out of any choice but out of certain historical and traditional reasons. Their role

in decision making is completely absent, as their presence in the traditional institutions is almost non-existent. Exclusion from political and social decision-making makes women have an inferior position in society in comparison to men.

Women play a major role in agriculture and livestock development but are excluded from the traditional institutions, which are mostly regulatory bodies and look after land management, enforcement of traditional and customary laws, settlement of disputes, management of forest and collection of revenues etc.

Nercormps Initiatives

North Eastern Region Community Resource Management Project for Upland Areas" (NERCORMP) came into being in 1999 as a joint initiative of the North Eastern Council, Ministry of DoNER, Government of India and International Fund for Agricultural Development (IFAD) with an overall objective "To improve the livelihoods of vulnerable groups in a sustainable manner through improved management of their resource base in

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a way that contributes to preservation and restoration of the environment". NERCORMP covered 2,640 villages and reached out to 1,88,843 households, formed 2960 Natural Resource Management Groups (NaRMGs)- an implementing institution that is in charge of planning at the village level and 8326 Self Help Groups (SHGs)- women group involved in savings and entrepreneurship. This project covered Changlang, Tirp and Longding Districts in Arunachal Pradesh; Karbi Anglong and Dima Hasao Districts in Assam; Chandel, Churachandpur, Ukhrul and Senapati Districts in Manipur, and West Khasi Hills and West Garo Hills Districts in Meghalaya. The approach of the Project is to build up women's friendly activities through women's groups in order to increase their confidence and managerial capabilities and to improve their voice in the community gathering.

NERCORMP also took up different measures to involve women in the implementation of the following Project activities:

- Separate interactions were held with women as part of the participatory planning process leading to the preparation of plans

at village level based on women's perceptions of their needs prior to the preparation of the Community Resource Management Plan (CRMP) for the village. Gender sensitization formed a major element of any training conducted by the Project.

- Women were given equal access to training and improved production methods, especially in the handloom sector as they are the principal beneficiaries of the designed product development, technology upgradation, skill enhancement and marketing interventions.
- Involving women in Project activities has enabled the rural women to enhance their mobility, ensure better health care and as a consequence also improve their productivity. Women-focused development initiatives have given more leisure time to the women, bringing them out of drudgery. Today they have access to resources and finance and this has paved the way for them to be an active participant in envisioning the future of their village.

- Basic rural infrastructure like low-cost sanitation, providing safe drinking water, inter-village roads (IVR), waiting sheds, and collection centers, etc has helped extensively in reducing the drudgery of women besides providing better health and hygiene and reducing the constant occurrence of diseases like diarrhoea, dysentery, anaemia and malaria etc. The low-cost sanitation has helped in bringing back the long-lost dignity to the rural women, as they have their private space now. Due to better road connectivity, it has provided for the members of the SHGs with better accessibility to the market places.

- NERCORMP constructed about 59,282 units low cost latrines so far in 10 districts covered under the project. The contribution of NERCORMP towards sanitation will go a long way towards achieving Swachh Bharat Abhiyan and also for the betterment of the poor and marginalized upland communities of North Eastern Region of India, in restoration of privacy and dignity of the rural womenfolk. The project also promotes and creates awareness on cleanness drive across the project villages to maintain hygiene of the villages.

- Mainstreaming women participation in the management of Community Conserved Areas (CCAs), NERCORMP has developed a strategy whereby the women members of the NaRMGs are listed NTFPs (Non Timber Forest Produces) that has been extracted for consumption and for sale from about 2 lakhs ha of CCAs across the project districts. They specify the time when they can be collected, traditional rules for their usage including 'dos and don'ts as well as the minimum

market rate at which they could be sold. The women groups also lay down the traditional and spiritual beliefs pertaining to the CCAs and frame certain rules and regulations for adhering to them. The women groups defined the roles and responsibilities of women and youth in managing CCA during the seasonal out-migration of men for wage labor and identify the support that is provided to the latter for carrying out the same.

NARMGs and SHGs as Catalysts

NaRMGs and SHGs work for a sustainable, robust and inclusive intervention in rural development. Institution building becomes necessary not only to respond to preferences of the community members but also for efficient utilisation of natural resources, and replication and upscaling of innovative traditional knowledge and practices. These CBOs were formed to supplement the existing traditional institutions and to help the communities to develop a more development-oriented institutional framework. NaRMGs foster participation and empowerment of women by being a member of the group and participating in the decision making for village planning, and making it compulsory for them to be selected as an office bearer.

SHGs are formed mainly to empower women and address the issues related to women both in livelihood and social sectors. They follow the classical SHG guideline, objective and functioning namely savings, credits, thrift, meetings, livelihood, and income-generating activities and social mobilization. Various capacity building programs are being taken up to build the core strength of the members and enhance their credit intake ability, leading to sustainability.



Further, in order to maintain sustainability, the NaRMGs are federated together into NaRMG Association at Cluster level and Apex NaRMGs Association at District level and in a similar way SHGs are federated together as SHG Federation at cluster level and Apex SHG Federation at district level, who are working together to shade their developmental needs and also promote Collective Marketing of their produces. These NaRMG Cluster Associations and SHG Federations had initiated expansion of the project model to neighbouring non-project villages by helping them to form NaRMGs, SHGs in the similar line to NERCORMP without any financial support.

The Project includes inculcating the habit of savings through women based SHGs, equal participation in decision making and implementation of village development work, transparency in financial transaction by taking financial decision in group meeting, maintaining books and records, maintaining bank account, Chartered Accountant audit of group records annually etc. The project initiated the banking habit among women by asking them to open bank account and providing training on banking operation, all fund

transfer from project to communities through bank account etc, which is one of the major agendas of the present Government in the Centre who recently introduced Prime Minister Jan Dhan Yojana, Cashless payment system etc. Another major achievement of the project is change of mind set, i.e. community now asking for loan instead of grant; provide community contribution for common assets created in their village, which gives greater ownership to maintain the assets with own contribution in term of money or free labour.

Paradigm Shift from Patriarchy to Women Empowerment

Ukhrul district is predominantly inhabited by Tangkhuls and with a small population of Kuki and Maring tribes. Tangkhul society is male dominated; women are excluded from decision making be it in family matters or society; denied property rights and inheritance. Women had no status in the patriarchy despite being the backbone of the family and economy. Leadership for womenfolk was unheard of among the semi or illiterate women although some had achieved commendable success and had contributed significantly in building the society.



Prior to the NERCORMP intervention, taking up economic activities by women outside the family jurisdiction was highly objectionable and unacceptable. Therefore, their activities were generally confined to household chores, domestic and agricultural activities no matter how much they were efficient and capable of doing things. Before the inception of the Self Help Group (SHG) movement the concept of Saving and Thrift habit were completely alien to the indigenous culture. Besides, women were hardly given the chance to manage the kitty of the family. Today there are many women entrepreneurs. On top of that, maintaining books of accounts were considered unmanageable. Over and above, crafty money lenders exploited the situation to the limit by charging 10 per cent interest per month for any given loan. Lack of basic infrastructural banking facilities and financial awareness in the district aggravated the developmental process.

Communities attribute that NERCORMP came to the district at the right time to address right agenda of empowering the needy especially the women. It has proved that the approach and strategy of the project on gender sensitisation and equity

have achieved paramount success. The project has contributed tangible and sustainable development through peoples' participation of both men and women. Ultimately a sea of change is visible in the mind-set of the people and the paradigm shift in the overall development of the district. Now, for every decision making on village development, women have equal say and are holding positions in the community based organisation such as Natural Resource Management Group (NaRMG). Therefore, NERCORMP in Ukhrul district is considered as a ray of hope for women empowerment.

Observing the poor banking facilities in the district, there is an urgent need was felt to establish an institute, which would facilitate financial services, such as short-term, mid-term and long-term. Thus, the SHGs of the district came together to form Ukhrul District Women Institute of Micro- Credit (UDWIM). The members of UDWIM have 757 women SHGs, who takes decisions regarding the functioning of the institute, giving emphasis on providing the best possible solution to the financial needs of the rural women. This initiative has helped the rural women to overcome poverty and uplift themselves towards a

better livelihood. In 2008 it started with a humble corpus of 1.3 crore (contributed by member groups) while today it has around 5 crores and benefitting more than 15,000 members with a lending interest rate of 1.5 per cent per month on a reducing balance. The success has been due to manifold reasons.

UDWIM, as a community managed micro finance institute, has helped empowered women by giving them access to credit and teaching the concept of savings, therefore enabling them to work towards attaining sustainable livelihood, food security and overall social development.

Conclusion

NERCORMP as a project has significantly reduced women drudgery, created an atmosphere for better women participation in planning and decision making on village development in the line of Women Empowerment; provided financial literacy including opening of bank accounts of women based SHG members in the line of Prime Minister Jan Dhan Yojana; improved health and sanitation for women through Low Cost Latrines and Safe Drinking Water in the line of Swachh Bharat Abhiyan, food and nutrition security of women through diverse livelihood activities in the line of National Food Security Programmes.

NERCOMRP is striving towards a conducive atmosphere for women besides aiming for a hunger free society across the North Eastern region of India, and the case studies as well as testimonies of the villagers indicates that we are moving in that direction. The project is moving towards a positive direction in order to achieve better future for the rural communities, especially for women who are living in the inaccessible and tough terrain of North East India. □

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The Fallacy of Socio-Cultural Isolation

Saroj Kumar Rath
Arun Kumar Acharya



...even now many people view the northeast India as ethnically alien, religiously different and politically-socially dissimilar with the rest of India. This understanding is entirely based on 'wrong facts, lack of understanding of the region and 'crown colony' conspiracy'

Coined by British civil servant Alexander Mackenzie, the term 'Northeastern Frontier'¹ in the contemporary time comprised of eight Indian states viz. Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura. Alexander Mackenzie was the first to use the term 'North-east Frontier' to identify Assam, including the adjoining hill areas and the princely states of Manipur and Tripura in his book 'North-east Frontier of India' in 1884. Mackenzie said, 'The North-east frontier of Bengal is a term used sometimes to denote a boundary line, and sometimes more generally to describe a tract. In the latter sense it embraces the whole of the hill ranges north, east, and south of the Assam Valley, as well as the western slopes of the great mountain system lying between Bengal and independent Burma, with its outlying spurs and ridges.'

Some contemporary historians of Assam talk about the region's 'Splendid Isolation' from the Western World² and argue that, with the introduction of English education only, the separation ended. The very idea of 'separation, isolation, distinctiveness and differentness' of northeast is stemmed from the impact of 'introduction of western print culture'³. Although, the Assamese

dynasties of yore years had a tremendous sense of history and used to maintain Buranjis or chronological record with surprising ease and accuracy, there was lots of oral history which existed for millennia. The transition from an oral to literary culture resulted in the loss of much of the history and tradition of northeast region. With the introduction of reading and writing, the inhabitants of northeast were forced to believe that oral traditions are simply 'stories laden with irrelevant, incoherent and falsely made up tales.'

Therefore, deprived of their history the northeast residents were coerced to believe that the history of the region is what the American missions and British colonial invasions taught them. Anything beyond the colonially authenticated facts and written records of the westerners are hearsay and untrue construction of the past. This is the primary reason why even now many people view the northeast India as ethnically alien, religiously different and politically-socially dissimilar with the rest of India. This understanding is entirely based on 'wrong facts, lack of understanding of the region and 'crown colony' conspiracy'.

Simple history about Assam tells its inseparable engagement with middle-India. For example,

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INSTRUMENT OF ACCESSION OF..... TRIPURA STATE.

WHEREAS the Indian Independence Act, 1947, provides that as from the fifteenth day of August, 1947, there shall be set up an independent Dominion known as INDIA, and that the Government of India Act, 1935, shall, with such omissions, additions, adaptations and modification as the Governor-General may by order specify be applicable to the Dominion of India;

AND WHEREAS the Government of India Act, 1935, as so adapted by the Governor-General provides that an Indian State may accede to the Dominion of India by an Instrument of Accession executed by the Ruler thereof:

NOW THEREFORE

Maharani Kanchan Prabha Devi, President of the Council of Regency,
I..... on behalf of His Highness the Minor Ruler of TRIPURA.....
Ruler of.....

in the exercise of my sovereignty in and over my said State Do hereby execute this my Instrument of Accession and

1. I hereby declare that I accede to the Dominion of India with the intent that the Governor-General of India, the Dominion Legislature, the Federal Court and any other Dominion authority established for the purposes of the Dominion shall, by virtue of this my Instrument of Accession, but subject always to the terms thereof, and for the purposes only of the Dominion, exercise in relation to the State of..... TRIPURA..... (hereinafter referred to as "this State") such functions as may be vested in them by or under the Government of India Act, 1935, as in force in the Dominion of India on the 15th day of August 1947 (which Act as so in force is hereinafter referred to as "the Act").

2. I hereby assume the obligation of ensuring that due effect is given to the provisions of the Act within this State so far as they are applicable therein by virtue of this my Instrument of Accession.

3. I accept the matters specified in the Schedule hereto as the matters with respect to which the Dominion Legislature may make laws for this State.

4. I hereby declare that I accede to the Dominion of India on the assurance that if an agreement is made between the Governor-General and the Ruler of this State whereby any functions in relation to the administration in this State of any law of the Dominion Legislature shall be exercised by the Ruler of this State, then any such agreement shall be deemed to form part of this Instrument and shall be construed and have effect accordingly.

5. The terms of this my Instrument of Accession shall not be varied by any amendment of the Act or of the Indian Independence Act, 1947 unless such amendment is accepted by me by an Instrument supplementary to this Instrument.

6. Nothing in this Instrument shall empower the Dominion Legislature to make any law for this State authorising the compulsory acquisition of land for any purpose, but I hereby undertake that should the Dominion for the purposes of a Dominion law which applies in this State deem it necessary to acquire any land, I will at their request acquire the land at their expense or if the land belongs to me transfer it to them on such terms as may be agreed, or, in default of agreement, determined by an arbitrator to be appointed by the Chief Justice of India.

7. Nothing in this Instrument shall be deemed to commit me in any way to acceptance of any future constitution of India or to fetter my discretion to enter into arrangements with the Government of India under any such future constitution.

8. Nothing in this Instrument affects the continuance of my sovereignty in and over this State, or, save as provided by or under this Instrument, the exercise of any powers, authority and rights now enjoyed by me as Ruler of this State or the validity of any law at present in force in this State.

9. I hereby declare that I execute this Instrument on behalf of this State and that any reference in this Instrument to me or to the Ruler of the State is to be construed as including a reference to my heirs and successors.

Given under my hand this...Thirteenth.....day of August, Nineteen hundred and forty seven.

Kanchan Prabha Devi

.....Maharani of Tripura.....
PRESIDENT, COUNCIL OF REGENCY,
TRIPURA STATE.

I do hereby accept this Instrument of Accession.

Dated this...Sixteenth.....day of August, Nineteen hundred and forty seven.



Chakravarti Rajagopalachari
.....
(Governor-General of India)

Source: National Archives of India

the last ruler of Tripura before independence, Queen Kanchan Prabha Devi, was a princess of Reva Kingdom of Madhya Pradesh who was married to the Tripura ruler⁴. It is Kanchan Prabha Devi, who

signed the accession treaty with India. Northeast's business and trade relations with South India, Bihar, Odisha and middle-India has been thriving since ancient times until today.

The peculiar geographic location opens the region's border to five foreign powers namely China, Myanmar, Bangladesh, Bhutan and Nepal. These five countries encircle the region leaving only a small land area to interact

with India. Historically identified with names like Pragjyotishpura, Kamrupa and Assam, the region is steeped in Sanatan Dharma philosophy and Hindu way of living since millennia. A less known fact about Assam is that, it is the only province, among the Indian provinces, which successfully defeated Islamic invasion throughout the entire period of Islamic rule in India.

North Eastern India: A Historical Explanation

India's Northeastern region is historically identified with three names Pragjyotishpura, Assam and Kamrupa. Other than oral history, the earliest mention of Assam can be found in KalikaPuran, Vishnu Puran and Jogini Tantra. Puranas and Tantra describes Assam as Kamrupa while the province is known as Pragjyotishpura in Mahabharata⁵. Recorded history about Assam starts with the decoding of Nidhanpur Copper Plates Grant and the Doobi Plates. The Nidhanpur Copper Plates Grant takes the history of Assam from Puranic script to recorded history. The Nidhanpur Copper Plate Grant, consisting of seven copper plates with a seal, was discovered by a peasant in 1912 in the village of Nidhanpur of Pancakhanda Pargana of Sylhet now in Bangladesh. The peasant sold the plates to different persons but fortunately Padmanath Bhattacharya recovered the first, second, third, sixth, seventh and one more which may be either the fourth or the fifth and discussed in various journals. Finally, he edited the inscription in the Kamarupasaranavali. Starting from Fourth Century AD, Nidhanpur Copper Plates Grant describes the genealogy of the Varman dynasty that continued until Seventh century AD. Bana Bhatta's 'Harsha Charita'⁶ and HiuenTsiang's Si-Yu-Ki narrates the history of Assam until Seventh Century.

Copper Plate inscriptions of Ratna Pal and Dharam Pal along with the Koch Bansabali filled the historical gap about rulers until 13th century⁷. In



Hornbill Festival

1228 AD, when Ahom kings took over the territory from Koch kings, they started calling the region as Assam. The Ahoms were one of the most history conscious dynasties endowed with a high degree of historical faculty. Ahom priests and leading families possessed Buranjis, or genealogies, which were periodically brought up to date. They were written on oblong strips of bark and were very carefully preserved and handed down from father to son.

Oral history ascribes the word Assam as a vulgar form of Sanskrit word 'Asama' meaning uneven. Sankaradeva, the eminent saint and socio-religious reformer of Assam, in his Bhagavata Purana written in Assamese during the early 16th century popularized the name Asama⁸. Inextricably linked with the Hindu way of life since time immemorial, Assam is the only province in India that has never surrendered to the invading Muhammadans. In early 13th century Muhammad Bakhtyar Khilji tried to subdue Assam only to face a crushing defeat at the hands of the Koch king. Bakhtyar Khilji's armies were killed and along with a handful of lieutenants Khilji was lucky to save his life while beating a retreat to the safety of the Bengal plain. History repeated itself when the Mughal general Mir Jumla invaded Assam in 1663 only to face the fate of Khilji. Mir Jumla not only faced a crushing defeat at the hands of the Ahom King Jayadvaj Singh but was also forced to sign a

humiliating treaty with the Ahom king. Mir Jumla's official historian wrote that 'A similar case had never happened before in the history of Delhi'. Assam remained out of bounds for the invading Muhammadans as well as their co-religionists. The province was closely affiliated with the core of ancient India and defied the 'surrendering and subjugating tendencies of northern India at the hands of a handful of invading Islamic rulers from Afghanistan and Central Asia'⁹.

The Muslims who accompanied Muhammad Bakhtyar Khilji during his infamous invasion of Assam in 1205 faced hostile opposition from the local tribes that forced Khilji's army of followers to retreat rather soon without leaving a footprint. As explained above, Khilji's failed expedition followed by a series of unsuccessful invasion by other Muslim invaders including Mir Jumla, the fierce general of Aurangzeb, who all tasted failure in Assam. However, by this time few Muslim soldiers preferred to settle in Assam instead of going back with their defeated leaders. These people married local Assamese girls some of whose relatives also converted into Islam.

The finesse with which the Muslims adopted local culture prompted Mir Jumla's official historian Shihabuddin Talish to quote that 'the local Muslims in Assam are nothing of Islam except the name. Their hearts are inclined



Anthurium festival Mizoram

far more towards mingling with the Assamese, than towards association with the Muslims⁹. Subsequently, in the middle of the 17th century a Muslim Saint Hazarat Shah Milon popularly known as Azan Fakir came to Assam. It is argued that being a fakir (mendicant) and a Sufi saint, he was successful in stabilizing Islam in Assam¹⁰.

Assam, during the Mughal-British era, divided into three regions-Sylhet, Manipur and Assam. The three regions interacted separately with various foreign regimes namely the Mughal, Burmese and British. Sylhet passed into the hands of the British in 1765, together with the rest of Bengal. It was during the Mughal rule, precisely during early 1700s, the region first interacted with the Muhammadans. *Ain-i-Akbari* of Abul Fazl clarified that Sylhet was an independent region. In Aurangzeb's reign (1648-1707), it is said that Raja Gobind of Sylhet was summoned to Delhi and there he became a Muhammadan. Since the conversion of Raja Gobind, some Muslims settled in Sylhet and that was the beginning of Islamic presence in Assam and adjacent regions.

After the Battle of Plassey in 1757, when the East India Company established its administration in Bengal and when Assam came under

the Company's protection after the Treaty of Yandabo in 1826, Muslims from the two provinces interacted frequently with each other. A number of Muslims from Bengal migrated to Assam and settled in the province. The new settlers encouraged their fellow religionists from Bengal to come to Assam and settle there to augment their economic prosperity.

Manipur and Assam were constantly threatened by the Burmese invasion starting from 1755 until 1826. In 1824, Purandar Singh of Ahom dynasty faced the invasion of the Burmese army. The Ahom king started negotiations with the British Political Officer David Scott to save Assam from the Burmese invasion. However, he was reluctant to compromise his independence. It was not possible for Assam to avoid British influence and with the aid of the East India Company, the First Anglo-Burmese War concluded with the signing of the Treaty of Yandabo on 24 February 1826¹¹. As per the treaty, Burmese agreed not to interfere in the affairs of Assam and recognized the Raja of Manipur Gambhir Singh.

Although by virtue of negotiation with the British, Assam saved her territorial limit from Burmese invasion, the Treaty of Yandabo established the grip of another foreign

power, the Christian-led British East India Company. The Company took control of Western Assam. Although the Company allowed the Ahom king to continue his rule, its indirect control started with the stationing of a political agent at the Ahom capital. Gobind Chandra was reinstated as the Raja of Cachar who by virtue of the treaty of Badarpur signed on 6 March 1824 acknowledged the allegiance of East India Company and agreed to pay a tribute of Rs. 10,000 a year. The Company reinstated Purandar Singha as king of upper Assam in 1832. The gradual grip of East India Company over Assam increased with clinical efficiency.

By 1838, the entire region including Upper Assam, Khasi Hills, Jaintia Kingdom, Cachar, Garo Hills and Khamtis were annexed. The province was made part of Bengal Presidency in 1838. By the year 1874, Assam was separated from Bengal and formed 'North-East Frontier non-regulation province' or Assam Chief-Commissionership. The British Raj began with the idea of the Presidencies as the centers of government. Until 1834, when a General Legislative Council was formed, each Presidency under its Governor and Council was empowered to enact a code of so-called 'Regulations' for its government. Therefore, any territory or province that was added by conquest or treaty to a presidency came under the existing regulations of the corresponding presidency. However, in the case of provinces that were acquired but were not annexed to any of the three Presidencies, their official staff could be provided as the Governor-General pleased and was not governed by the existing regulations of the Bengal, Madras, or Bombay Presidencies. Such provinces became known as 'Non-Regulation Provinces' and up to 1833 no provision for a legislative power existed in such places.

During the partition of Bengal in 1905-1911, Assam was placed under the new province of Eastern Bengal

and Assam. In 1912, after the end of Bengal's partition, Assam became a separate province¹².

The vast virgin valley and hills of Assam attracted and absorbed Muslim peasants and settlers which contributed to the growth of Islam in the province. So much was the growth



Wangala Festival, Meghalaya

S. No.	Name of the Princely States	Detail of Documents
1	Assam	1. Assam 2. Manipur 3. Sikkim
2	Bengal	1. Tripura 2. Cooch Behar
3	Khasi Hill States	1. Bhowal State 2. Cherra State 3. Dwara Nangtynmen State 4. Jirang State 5. Khyrium State 6. Langrin State 7. Lyniong State 8. Maharam State 9. Malai Sohmal State 10. Mawdon State 11. Mawiang State 12. Mawlong State 13. Mawphlang State 14. Mawsynram State 15. Mylliem State 16. Myrian State 17. Nangkhlaw State 18. Nanglwai State 19. Nobsohphoh State 20. Nangspung State 21. Nongstein State 22. Pamsanugut State 23. Rambrai State 24. Shella Confederacy State 25. Sohiong State

of number of Muslims in Assam in the subsequent time that the elections to the Legislative Assembly of 1937 produced a coalition government led by Muhammad Saadullah, the Muslim League leader. Muhammad Sadullah became the chief minister from 1 April 1937 to 10 September 1938; from 17 November 1939 to 25 December 1941 and from 24 August 1942 to 11 February 1946. Sadullah was a member of the Executive Committee of the All India Muslim League when the league met at its annual gathering at Lahore on 23 March 1940 and passed the 'Pakistan Resolution'¹³.

During Sir Mohammad Sadullah's Muslim League ministry, a concerted effort was made to encourage the migration of Muslims from Bengal into Assam for political reasons. After a visit to Assam in December 1943, Lord Wavell, the Viceroy, wrote in the Viceroy's Journal, 'The chief political problem is the desire of the Muslim Ministers to increase this immigration into the uncultivated Government lands under the slogan of Grow More Food but what they are really after, is Grow More Muslims'¹⁴.

After partition, Saadullah decided to stay in Assam and he was the only



Ambubachi-Mela-Assam

Source: National Archives of India

member from the Northeast India to be elected to the Drafting Committee of Constituent Assembly of India in 1947¹⁵.

During 6-7 July 1947, Government of India decided to organize Sylhet referendum to determine the future of Sylhet. Voters were given two options in the referendum-either to join India or to join Pakistan. A Muslim majority district, Sylhet decided in favor of Pakistan. Out of the 423,660 valid votes, 56.56 per cent voted in favor of joining Pakistan while 43.44 per cent decided to remain with India. On 3 June 1947, Viceroy Mountbatten announced that 'Though Assam is predominantly a non-Muslim province, the district of Sylhet which is contiguous to Bengal in predominantly Muslim. The rest of the Assam province will in any case continue to remain in India.'

Sylhet referendum had a peculiar background. Not only that Sylhet was a Muslim-majority district within a Hindu-majority Assam but also its Muslim inhabitants speak Sylheti language. It is argued by scholars that since the Muslims of Sylhet were Muslim League supporters, in an effort to consolidate Congress party's position in Assam, Congress leaders surgically ceded the Muslim majority Sylhet to East Pakistan. During his discussion with the Cabinet Mission, Congress leader Gopinath Bardoloi expressed his desire to 'hand over Sylhet to Eastern Bengal'¹⁶.

Starting from the fourth century until the independence of India, Assam was ruled by four main dynasties. It is impossible to rule for such a long period without being the son of the soil and without the wholehearted support of the local population, hill tribes and neighboring provinces.

At the time of Independence 'Northeast' basically meant Assam and the princely states of Manipur and Tripura. With the advent of independence, the 25 Khasi states had formed themselves into a federation

of Khasis in 1946. There was no talk of alienation or distinctiveness during the independence of India and subsequent merger of Northeastern princely states with India. Being one of the flamboyant areas of India, the 'Northeastern States' signed the instrument of accession with India without the slightest trouble or second thought. There was no sense of separatist wave nor any inclination to remain independent. Tripura signed the Instrument of Accession on 13 August 1947 and three days later Governor General Lord Mountbatten accepted the accession on 16 August 1947. On 21 September 1949, Maharaja Budhachandra signed a Treaty of Accession merging the kingdom into India.

The Federation of Khasi States signed an agreement on 8 August 1947 to accede into the Indian Union on the three terms of defence/communication and foreign policy. Twenty of the twenty-five states signed the Instrument of Accession in favour of India on 15 December 1947, Nobosophoh signed on 11 January 1948, Mawlong on 10 March 1948, Rambrai on 17 March 1948, and Nongstoin on 19 March 1948. On 21 September 1949, Maharaja Budhachandra signed a Treaty of Accession merging the kingdom into India. The Instrument of Accession of the Khasi Hills States was accepted by the Governor General on 17 August 1948.

Politics, colonial consideration, vested interests and historical apathy manufactured the isolation debate. The fallacy of separation of Northeast India is more of a motivated political-intellectual subject than a theory based on sound empirical argument.

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Reaping Benefits of Artificial Intelligence

Avik Sarkar



India faces large skill gap in sectors like health-care and such AI based technologies can help in bridging that gap by empowering the citizens and making them more productive in their daily functioning.... The applications of AI are unlimited in the Indian context – judiciary can use AI based systems to reduce pendency in court cases, education can develop learning modules which are in sync with the pace of the student's leaning or in agriculture AI based systems based analysis of satellite imagery can provide early estimates of crop yields

Artificial Intelligence (AI) is defined as the ability of a machine to perform cognitive functions we associate with the human mind, such as perceiving, reasoning, learning, interacting with the environment, problem solving, and even exercising creativity. There are varying views on Artificial Intelligence (AI) globally – some see this as the next biggest disruptive technology that would bring accelerated growth and productivity, whereas others view it in a rather negative sense combined with huge job losses. PricewaterhouseCoopers (PwC) estimates the global AI market business opportunity of an additional \$15.7 trillion – making it the biggest commercial opportunity in today's fast changing economy. This article would provide a broad overview by demystifying some of the facts related to AI while providing some background on the evolution of this subject. The article would draw upon the announcement made during the recent budget – how India can benefit from AI and implications of the same going forward.

Let us consider the climax sequence from the 2009 popular movie “3 idiots” to demonstrate the basic concept of AI and other supporting technology. In the climax scene, the protagonist

Rancho (played by Aamir Khan) who is an engineering student with no medical training has to carry out delivery of a pregnant lady during a critical labor pain. Such a situation is quite common in villages with little medical support, especially in the tribal or remote ones. Technology comes to the rescue in this movie, where the sister of the pregnant lady Pia (played by Kareena Kapoor), a trained doctor assists Rancho over video call to successfully conduct the delivery and a healthy baby is born. Such applications of remote tele-medicine are now possible across various pockets of India through various flagship schemes of the government like BharatNet (high speed internet connectivity in villages), RECL (rural electrification) and Digital India programme.

In the movie sequence, Pia (the trained doctor) was available for the entire duration of the delivery to assist Rancho. We would need one trained doctor for every nurse (or proxy doctor) in the village location. In reality, this can be a huge bottleneck in scaling such solutions to all the villages in India. An AI based recommendation system can come to the rescue here. An AI based recommendation system can advise the nurse about the diagnosis and the next step in many common conditions faced by the patients. The Artificial

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Intelligence system can learn from huge amounts of historic data, the medication that was prescribed by doctors under similar diagnosis and symptoms that led to such diagnosis. AI combined with digital technology can play a huge role in empowering the citizen by augmenting with knowledge and actionable intelligence – in this example, empowering the nurse in the village healthcare centre is one such empowering move by AI.

History of Artificial Intelligence

AI as a research topic in computer science has been around since the mid-1950s. Foundations of AI have been laid long back with the invention of the perceptron algorithm for artificial neural network (ANN) in 1958. Around the same period in 1950, Alan Turing published a paper titled “Computing Machinery and Intelligence” – with the aim of creating a machine that can mimic human intellect and behaviour. Developing machines that match human intelligence in terms of logic, reasoning, speech, perception, reflex and interactivity has long been the aim of researchers. This theme of intelligent machines has been an idea primarily of researchers and science fiction movie makers. During 1996-97 an IBM computer by the name of “Deep Blue” defeated the reigning champion Garry Kasparov in a chess game. Though this was a great achievement in itself, the task performed by the “Deep Blue”



machine was fairly logical in nature and did not involve deep human perceptions related to sight and speech.

The last few decades have seen a range of digital technology transformation that have brought back the relevance of Artificial Intelligence backed with Big Data. Round 1960-70 saw the rapid phase of digitization globally; all sorts of businesses from banking, insurance to retail were moving from paper to electronic mode of operation. This led to the creation of huge amounts of data combined with the huge scale of computing power and massive data storage at reasonable cost. This led to the development of the term of “Big Data” which allowed processing and analysis of huge amounts of data. Big Data along with enormous increase

in computation and low-cost storage gave a new lease of life to the field of artificial intelligence.

Some believe the invention of the deep learning algorithm is responsible for the new emergence of AI. The theoretical foundations of “deep learning” algorithm supervised multilayer artificial neural networks (ANNs) was discovered in 1965. During that age, there was no availability of massive scale computation systems or gigabytes and terabytes of data to train massive AI systems. Aspects related to human speech, like understanding human conversation and framing an appropriate reply, were considered a very complex task for the humans to perform. IBM’s question answering system, “Watson”, defeated the two greatest “Jeopardy!” game players in 2011. “Jeopardy!” is a classic game show on American television with a twist, in which the answers are given first, and the contestants have to frame the questions based on clues supplied. The other complex task performed by humans is that of sight based on which objects are recognized and perceived. An AI based system won the ImageNet’s image-classification competition by a large margin in 2012. The “AI Index” by the Stanford University measures the performance of AI systems against humans – tasks like speech recognition/comprehension and image recognition from objects have reached at par performance of the best AI systems.





How can AI help India?

Let us consider the same example of health-care – India has less than one (0.725) physician per thousand persons and the number is even worse for the number of specialists per thousand persons. Given the rate at which new physicians or doctors are entering the system, this figure is unlikely to change in the near future. Hence, a large number of rural healthcare centres face a shortage of doctors and function with only nurses on the ground – the condition can be even worse in remote and tribal areas. The shortage of trained medical staff is even more acute for clinical specialists like radiologists or pathologists – professionals who spend most of the time looking at images to determine whether the patient had a certain disease. We have just seen the excellent performance of the AI based systems in tasks like image recognition. Here big data based artificial intelligence can help in bridging the skills gap and empowering the medical staff on the ground. The AI based system can save the time of the radiologists/pathologists by providing recommendations based on the underlying images – they may simply review the cases requiring much lesser time than carrying out detailed investigation. The clinical specialists on the ground can concentrate their efforts on the complex cases which require expert intervention and in the process empowering them and making them more productive.

While attending to the patient, the nurse can enter the key patient symptoms and measurements into a hand-held device powered with AI. Based on the information about the patient symptoms and measurements the device recommends the likely diagnosis and prescribes suitable medication – this may be further augmented with detailed explanation for prescribing these medication. In this case, the nurse can administer a prescription that an experienced doctor would have prescribed. The nurse would also have the option not to accept the recommendation if it doesn't seem most suitable for the current patient condition. Again these recommendations are provided based on big data based artificial intelligence algorithms running at the backend – which analyses large amount of historic anonymous patient records with similar symptoms and prescribed medications. India faces large skill gap in sectors like health-care and such AI based technologies can help in bridging that gap by empowering the citizens and making them more productive in their daily functioning.

Andrew Ng, Professor at Stanford University and co-founder of Coursera, terms AI as the new electricity in his famous quote: “Just as electricity transformed almost everything 100 years ago, today I actually have a hard time thinking of an industry that I don't think AI would transform in the next several years.” The applications

of AI are unlimited in the Indian context – judiciary can use AI based systems to reduce pendency in court cases, education can develop learning modules which are in sync with the pace of the student's leaning or in agriculture AI based systems based analysis of satellite imagery can provide early estimates of crop yields.

Like other disruptive technologies, AI would bring in a shift of paradigm in the way people live and work today. The last big disruption occurred when computers were first introduced in banks and other institutions across India – even leading to widespread protests. The computers brought in the information technology (IT) revolution, which made India the global leader in IT space – where home grown Indian firms are competing globally with the best IT companies of the world and India as the leader with the highest volumes of software exports. When computers were introduced, there were no IT skilled people in India and now India has the largest talent pool of IT professionals. Similarly, a disruptive technology like AI would bring in a large disruption in the jobs – new skills would emerge and government has to play a pivotal role in re-skilling those people. In the manufacturing sector, AI can lead to automation moving people from low productivity jobs to high productivity roles.

Adoption of any new technology, including the use of big data based AI to empower the nurse in a rural health centre (as in the example quoted earlier) involves change management. This change management is an important aspect of any new technology adoption program and can be the thin defining line between the success and failure of this change initiative. The nurse needs to equip herself towards the use of the digital platform which is intended to empower them – this might involve a bit of new skill development. Lack of appropriate skilling along with new technology adoption often leads to the failure of such programs and the new technology. This, in, turn is made responsible for the job loss due to this

re-skilling gap. For example, a nurse might be well trained in handling the patient and taking observations but might not be well versed in using a handheld device, its various options, etc. In such a case, the nurse who is an expert in her medical domain needs to be augmented with appropriate digital skills which would empower her in her function with the help of artificial intelligence.

AI Ecosystem in India

The current budget made the following announcement: “Global economy is transforming into a digital economy thanks to the development of cutting edge technologies in digital space – machine learning, artificial intelligence, internet of things, 3D printing and the like. Initiatives such as Digital India, Start Up India, Make in India would help India establish itself as a knowledge and digital society. NITI Aayog will initiate a national program to direct our efforts in the area of artificial intelligence, including research and development of its applications.”

Today, AI is viewed as a strategic technology that would lead to accelerated economic growth and development of nations. Few countries have already come up with policies for accelerated growth in the AI sector. The impact of AI can go beyond nations to corporate enterprises in both private and public sector. Currently, India is not considered as a leader in the AI space, in spite of having leadership position in IT services and services around AI/Big Data. There are fabulous examples of AI research and early demonstration across pockets in research labs, academia, start-ups or private players. Also, the practitioners working on the ground have little technology knowledge for AI adoption. One major stumbling block towards accelerated AI adoption is the lack of long term sustainable collaboration between these players. What are the key ingredients to establish India as a leader in the AI space globally?

According to Accenture Research, the key pillars for developing a vibrant



ecosystem in India are Universities, Start-ups, Large companies, Policy Makers and multi-stakeholder partnerships – India has strong potential across many of the pillars. Universities and research labs in India have been involved in cutting edge AI research for the last 40 years. India is home to some of the largest IT companies of the world along with all the global MNCs having their development or research centres already based in India. India has a very vibrant start-up ecosystem with a large number of venture capital funds based in India and the government is very supportive of start-up initiatives in the country. The policy making body NITI Aayog, has already embarked upon the mission of accelerating the innovation ecosystem in India. Through the flagship Atal Innovation Mission (AIM) program it promotes tinkering labs in schools and incubation centres to help start-ups. There is a fair amount of partnership between the start-ups and the venture capital funds – but the information on the same is quite fragmented.

The AI ecosystem in India can see tremendous growth through partnerships and collaborations. Start-ups provide an agile and lean approach towards developing new solution prototypes but often do not have enough bandwidth for in-depth

research – here access to researchers in that domain would be really helpful. Government has to play a pivotal role in enabling these partnerships at various levels. Advancement of research in AI can be promoted through partnership between the academia/researchers with the industry and start-ups using the research findings. Similarly accelerated adoption of AI can happen by partnership between industry and academia with the sectors – healthcare, agriculture, education, etc. Commercialization of AI based technologies as services, applications or embedded hardware can be promoted by connecting the industry players with the venture capitals and trade bodies.

Artificial Intelligence is the technology that has the potential to drive India's growth over the next few decades. This growth would primarily be driven by private players in the AI ecosystem and government would play a pivotal role in enabling accelerated partnerships between the various players in the AI ecosystem. There is also a need to look at re-skilling people as this disruptive technology would create many new jobs while displacing some existing ones. Early identification of those new roles based on AI and re-skilling people on those roles would be crucial to reap benefits of this AI revolution. □

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DO YOU KNOW?

INTERNATIONAL SOLAR ALLIANCE (ISA)

Vision and Mission of The ISA

Vision and mission of the International Solar Alliance (ISA) is to provide a dedicated platform for cooperation among solar resource-rich countries where the global community, including bilateral and multilateral organizations, corporate, industry, and other stakeholders, can make a positive contribution to assist and help achieve the common goals of increasing the use of solar energy in meeting energy needs in a safe, convenient, affordable, equitable and sustainable manner. Earlier, there was no specific body in place to address the specific solar technology deployment needs of the solar resource-rich countries located between the Tropic of Cancer and the Tropic of Capricorn. Most of these countries are geographically located for optimal absorption of the sun's rays. There is a great amount of sunlight year-round which can lead to cost-effective solar power and other end users with high insolation of almost 300 sunny days in a year.



Most of the countries have large agrarian populations. Many countries face gaps in the potential solar energy manufacturing eco-system. The absence of universal energy access, energy equity, and affordability are issues common to most of the solar resource-rich countries. International Solar Alliance (ISA) is conceived as a coalition of solar resource-rich countries to address their special energy needs and will provide a platform to collaborate on addressing the identified gaps through a common, agreed approach. It will not duplicate or replicate the efforts that others (like International Renewable Energy Agency (IRENA), Renewable Energy and Energy Efficiency Partnership (REEEP), International Energy Agency (IEA), Renewable Energy Policy Network for the 21st Century (REN21), United Nations bodies, bilateral organizations etc.) are currently engaged in, but will establish networks and develop synergies with them and supplement their efforts in a sustainable and focused manner.

The International Solar Alliance was unveiled by the Prime Minister Shri Narendra Modi and then French President Francois Hollande at the U.N. Climate Change Conference in Paris on November 30, 2015. The ISA has set a target of 1 TW of solar energy by 2030, which current French President Emmanuel Macron said would require \$1 trillion to achieve. India is a founding member of this alliance. It plays an important role in the alliance. The ISA is the first international body that will have a secretariat in India. India, with a target to produce 100 GW of solar energy by 2022, would account for a tenth of ISA's goal.

The ISA is open to 121 prospective member countries, most of them located between the Tropics of Cancer and Capricorn as this is the region worldwide with a surplus of bright sunlight for most of the year.

So far, 56 countries have signed the ISA Framework Agreement. These include Australia, Bangladesh, Benin, Brazil, Burkina Faso, Cabo Verde, Cambodia, Chad, Chile, Comoros, Costa Rica, Cote d'Ivoire, Cuba, Djibouti, Dominican Republic, DR Congo, Equatorial Guinea, Ethiopia, Fiji, France, Gambia, Gabon, Ghana, Guinea, Guinea-Bissau, Guyana, India, Kiribati, Liberia, Madagascar, Malawi, Mali, Mauritius, Mozambique, Nauru, Niger, Nigeria, Peru, Rwanda, Sao Tome, Senegal, Seychelles, Somalia, South Sudan, Sri Lanka, Sudan, Suriname, Tanzania, Togo, Tonga, Tuvalu, UAE, Uganda, Vanuatu, Venezuela and Yemen.

The objective of ISA

Member countries will collectively address key common challenges to the scaling up of solar energy in line with their needs.

Members take coordinated actions through programmes and activities launched on a voluntary basis, aimed at better harmonizing and aggregating demand for, inter alia, solar finance, solar technologies, innovation, research and development, and capacity building.

In this endeavor, Members cooperate closely and strive for establishing mutually beneficial relationships with relevant

organisations, public and private stakeholders, and with non-member countries.

Each Member shares and updates, for those solar applications for which it seeks the benefits of a collective action under the ISA. The Secretariat maintains a database of these assessments in order to highlight the potential for cooperation.



Programmes and Other Activities

A set of actions, projects and activities would be taken in a coordinated manner by the member countries and they would have simple, measurable, mobilizing targets. A Programme can be proposed by any two Members or group of Members, or by the Secretariat. The Secretariat ensures coherence among all ISA Programmes.

Progress So Far

On June 30, 2016, the alliance entered into an understanding with the World Bank for accelerating mobilization of finance for solar energy. The Bank will have a major role in mobilizing more than the US \$1000 billion in investments that will be needed by 2030, to meet ISA's goals for the massive deployment of affordable solar energy.

At the World Future Energy Summit (WFES) held in Abu Dhabi in January 2018, the government of India announced the setting up of a \$350 million solar development fund to enable financing of solar projects.

KUSUM Scheme – Harnessing Solar Power for Rural India

Solar water pumps to be installed in remote areas for irrigation needs Farmers can get extra income by selling surplus solar power to DISCOMs

The Government of India is in the process of formulating a Scheme 'Kisan Urja Suraksha evam Utthaan Mahabhiyan (KUSUM)' which, inter alia, provides for:

- (i) installation of grid-connected solar power plants each of capacity up to 2 MW in the rural areas;
- (ii) installation of standalone off-grid solar water pumps to fulfill irrigation needs of farmers not connected to the grid;
- (iii) solarization of existing grid-connected agriculture pumps to make farmers independent of grid supply and also enable them to sell surplus solar power generated to DISCOM and get extra income; and
- (iv) solarization of tube-wells and lift irrigation projects of the Government sector.



The details on funds and mode of implementation will be decided on approval of the Scheme.

This information was provided by Shri R.K. Singh, Union Minister of State (IC) Power and New and Renewable Energy in a written reply to a question in the Lok Sabha on March 14, 2018.

Moving Towards Integration

S J Chiru



The current focus of the government to upgrade infrastructure in the region through various projects for improvement of roads, rail, and inland waterways and air connectivity and communication network is a welcome change. Besides, Government is implementing various schemes for development, upgradation and promotion of micro, small and medium enterprises in the region

How can we mainstream the North East?' is a question often asked about the North East Region of India. Policy makers, law enforcement officers, journalists, scholars and friends have all posed this question to me. The question belies a host of preconceived notions about the region and often takes pejorative connotation. It is a no-brainer then that many North Easterners do not always take kindly to this question. Many a time, the question has confounded me and has challenged me to understand 'mainstreaming'.

India is like a kaleidoscope made up of its diversified arts, cultures, races, languages, religions, etc. In that sense, one may confidently argue that the North East, as an integral part of the country, does not need any more mainstreaming than South India or Saurashtra or Punjab or Odisha would. However, that the region needs integration to the mainstream is a popular notion which beckons examination.

A Perspective on Mainstreaming :

What is it that constitutes mainstream India and why is the North East Region often considered to be out of this mainstream. The idea of India as a nation is enshrined in the Constitution which lays down the political principles, framework for governance, power and duties of the government, rights and duties of its citizens and the directive principles

on how we govern ourselves and achieve progress. It sets out goals and aspirations of the citizens in terms of political integration, socio-economic development, the freedom and duties laid out for its citizens. The concept of mainstreaming, in that sense, should signify the level to which a region or a state has imbibed these ideals and achieve these goals and aspirations.

Thus defined, we can safely assume that each state or region in the country is part of the Indian mainstream in varying degrees. For example, the North Eastern region which has a better literacy rate than many other regions of the country can be said to be more mainstreamed in that aspect whereas it may compare poorly in terms of infrastructure facilities like road and rail connectivity, power, industrial development, etc. The people of North East India are also perceived to be relatively alienated from the rest of the country in the socio-political spectrum. The fact that insurgency has affected all but one of the states does not help in dispelling this notion. However, most people of the North East are avid and proud citizens of the country and questioning that pride would smack of lack of acceptance and may cause alienation. In fact, the phenomenon of large migration of people from the North East Region into various places in the country provides us with a good case study about the manner and level of interaction between people of this region with those in the rest of the country and the issues it throws up.

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Migration Scenario:

The last three decades have seen a remarkable growth of migration from the North East to different parts of the country mostly in search of higher education and job opportunities. This has enabled intermingling and interaction in a process that has thrown up a host of issues and puts to test long held notions on both sides.

Upto the 1980s, it was mainly the students who went to big cities like Delhi to pursue higher studies. After completing of courses, most of these students returned to settle in their native states. Later on, the nature of migration altered when many jobseekers also started coming to seek better opportunities with a willingness to work anywhere in the country. This phenomenon peaked around the time that the information technology revolution started. The IT enabled enterprises like call centres generated demand for English speaking employees and they found a suitable and willing pool of manpower in the young people from North East staying in these growth centres. The opening up of such job markets had cascading effects in other sectors prompting many young people to migrate. They landed jobs such as air hostesses, front desk assistants and sales persons in spas and hotels, etc. By then, migration had taken place to almost all big cities like Delhi, Bengaluru, Pune, Chennai, Kolkata and Mumbai and later, even to smaller towns and cities. There also surfaced a small stream of workers

from the region working in construction sites, tea gardens and plantation estates in South India, etc.

Factors of Migration:

Given the huge size of the country, the number of people migrating from the North East may not appear significant in proportion. However, by the sheer speed and scale from the region's perspective, strong push and pull forces are seen to be responsible for this phenomenon.

The Shukla Committee concisely pointed out that the region is confronted with four deficits, 'a basic needs deficit, an infrastructural deficit, a resource deficit, and, most important, a two-way deficit of understanding with the rest of the country which compounds the others'. This assessment provides us with a plausible explanation.

An intricate interplay of the first three deficits creates an atmosphere in the socio economic fabric of the region to provide a big push for migration. The main push factor has been the lack of quality educational infrastructure which forces parents to look for better educational avenues. Besides, the spectre of insurgency and socio political unrests that disturbed peace in the region vitiated the atmosphere.

On the other hand, cities like Delhi and Kolkata have long been the preferred destinations for those who wanted to pursue higher education. A majority of aspirant civil servants, bankers, lawyers and scholars have

found their way to these cities as student migrants.

Life of a Migrant :

As the number of students and job seekers rapidly grew, they became more and more visible at college campuses, call centres, malls, star hotels, spas and in the places they stay. However, this comes at a huge cost as it is very difficult for a young student to adjust in a big city. Most students hail from small villages and towns with strong community bonding. Suddenly, he is left to fend for himself in a totally different environment and way of life. While trying to cope by seeking out people from similar backgrounds, they often end up ghettoising themselves. Their different physical appearance and social mores also make them stand out and become vulnerable targets for social profiling and discrimination. Increasingly, cases of abuse, molestation, rape, racial attack, and killing started surfacing in some cities like Delhi and Bengaluru. Reports of human trafficking from the North East also became a pressing concern. There was a risk for the 'deficit of understanding' to be widening over time rather than being bridged.

Safeguarding the Vulnerable Migrant:

The murder of Nido Tania, a 19 year old student from Arunachal Pradesh in Delhi in September 2014 proved to be a watershed moment. The incident made Government of India and state governments recognise the severity of the situation. Government of India set up the Bezbaruah Committee to look into concerns of the persons hailing from the North-Eastern states who are living in different parts of the country, especially the Metropolitan areas, and to suggest suitable remedial measures which could be taken by the Government. Though many observers opine that the government's attention came a tad too late for Nido and the others who suffered, it facilitated the committee to have a detailed look into the issues and made much needed recommendations. Welfare committees formed in many cities across the country on the basis of



the Committee's recommendations are today functioning as a channel of communication as they jointly work with local authorities in dealing with issues concerning migrants from the North East. Full implementation of the recommendations will go a long way in alleviating the concerns faced by migrants from the North East. Such safeguard mechanisms are, by themselves, unlikely to completely stop crimes against migrants but it will act as a deterrent to potential lawbreakers.

Secondly, it also generates awareness about the underlying issues and the necessity for concerted efforts to narrow the two-way deficit of understanding. Increasing intermingling and interaction between people groups can aid in bridging gaps if it is allowed to happen within a framework with adequate safeguards. Caution should also be applied on relying too heavily on implementing such safeguards through the law enforcing agencies alone since it could exacerbate the existing schism. The goal should be to tackle emerging issues before they become law and order issues. It is for this reason that involvement of social organisations and change makers from both sides becomes imperative, with the government machinery and law enforcement agencies acting as facilitators. So far, this is a weak link. The objective should be to make society at large a bulwark against any form of discrimination against migrants.

Migration from North East India is likely to continue in the

new future. Implementing of the Bezbaruah Committee report and taking proactive steps to provide a safe social environment of mutual respect and understanding would provide a good grounding for the future generations.

The Way Forward:

The Indian economy has seen unprecedented growth during the last 25 years or so and India has emerged as an economic superpower. Increasing economic opportunities will continue to attract people from all over the country to be a part of this growth story. In this scenario, the migration of youth from the North East to other parts of the country is a good sign and augers well for the region.

However, the worrying part of the migration story is that people are pushed into migration due to negative factors like dearth of good educational infrastructure, crumbling public healthcare system, lack of state resources, stagnant economic opportunities, insurgency, corrupt and inefficient administration which continue to stymie growth in the region. It does not auger well for the region if majority of migrants are young students seeking to pursue higher studies outside due to the lack of good educational ecosystem with prospect of academic excellence. Places like Shillong which used to be the educational hub of the region lost out to cities like Delhi, Chennai,

Pune, Kolkata and Mumbai. The cost of living in these cities is very high, making education costlier. The lack of job opportunities in the region in sectors like tourism, IT enabled service sector, food processing, hospitality sector and healthcare has resulted in a drain of human resource from the region. It is clearly made out that this skewed migration pattern is indicative of the imbalance between the push and pull factors and how underdevelopment in the region comes with a huge opportunity cost to be paid in terms of development in these sectors.

Setting up of Department for North Eastern Region and the North Eastern Council by Government of India has been instrumental in forging a concerted effort to look into developmental issues of the North East. The current focus of the government to upgrade infrastructure in the region through various projects for improvement of roads, rail, and inland waterways and air connectivity and communication network is a welcome change. Besides, Government is implementing various schemes for development, upgradation and promotion of micro, small and medium enterprises in the region. The Look East policy of the government has a huge potential to transform the development landscape by providing the growth engine and ensure that the states fully partake as growth centres and not merely participate as a conduit for flow of trade from other parts of the country.

The success of this renewed focus on North East India through various initiatives will, however, depend on proper implementation of the schemes.

In the words of the Prime Minister, "India will grow when all regions grow. I see no reason why the North East can't be developed." This optimism is what the people of the region should embrace to usher an era of development in the North East which has so far been denied.

Perhaps then, the question, 'How can we mainstream the North East?', would be passé. □

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Successful Education Transformation

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The current budget gives boost to on-going efforts to address the issues of dropouts amongst the tribal students, particularly north-eastern students, by increasing outlay for post-matric and pre-matric scholarships. This increase is expected to benefit around 19 lakh and 20 lakh tribal students respectively. In addition to budgetary outlays, the emphasis on improving learning outcomes is a significant way forward towards improving the quality of education in North-Eastern States as the significant proportion of students in this region leave schools without acquiring minimum accepted level of learning

The Indian education landscape is witnessing a major reform across the sector. On the one hand, the development of the New Education Policy, through a consultative process, is underway and on the other, there is a thrust towards strengthening and expanding high quality institutions (various legislation amendments/bills related to IIT, IIM, School of Planning and Architecture, Central Universities and Higher Education and Research have been prepared). The education system, however, has always been plagued with one shortcoming or the other: infrastructure, teachers, policy, budget etc.

The recently announced budget has been one of a kind in the last decade or so. This year's budget has laid clear emphasis on education as the words 'education', 'educational', 'teacher', 'teachers' have been used more than 35 times – perhaps the highest in the last decade. The speech lays clear emphasis upon taking a holistic approach and thus invoking much needed system thinking. This is evident from important initiatives such as bringing integration in the school education sector and integrated B.Ed. The budget speech also focused on the training of untrained teachers which reminds us of the fact that the 'quality of school education can be no better than the quality of its teachers'. The investment in education now should not only be perceived

as just 'financial investment' rather investment of resources and optimising the available budget. After sustained capital investments in programmes like SSA and RMSA for a long time, it is now time to ensure that money is invested in areas to strengthen quality.

Section 12 (1) (c) of the RTE Act imposes a legal obligation upon private unaided schools to reserve 25 percent of seats in the entry-level class for children from disadvantaged categories. Coupled with other factors, this has resulted in reduced enrolment in government schools alongside an increase in the number of students in private schools. A quick analysis of enrolment and budget allocation in government schools shows that the average amount available per child under schemes like SSA and RMSA has actually increased.

Another big and bold step which the current budget speech has underlined is the focus on rationalising the centrally sponsored/funded education related schemes. The rationale for a merger of multiple existing education-centred schemes is obvious – these schemes were operating in silos and generated system-level inefficiencies as they lack synergy and convergence. This often resulted in duplication of managerial effort at all levels of implementation and created confusion at field level with no scope for flexibility in fund flow.

Re-appropriation of funds from one scheme to another is not currently possible at the implementation level even if one scheme urgently requires

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Way Forward

India has historically been conservative on public spending on education and continues to be so. The reforms envisaged through the NPE would require substantial increase in public expenditure on education as well as support through CSRs and CSOs. The Central and State governments must also look to international development partners to provide strengthening support in the education sector. International development partners (DPs) like DFID, the World Bank, ADB etc. not only contribute through financial assistance but also bring in international experience of best practices. The DPs can also contribute through designing tailor-made technical assistance and capacity building programmes.

The merger of educational schemes would be useful in many ways and can be expected to (i) optimise the use of funds available for the sector (ii) cater to the diverse needs of States /UTs through a cafeteria approach (iii) lead to streamlined and efficient management, monitoring and supervision (iv) reduce administrative efforts and costs (v) bring fluidity in inter-component fund flows and (vi) institutionalise systems of financial control and discipline.

Quality improvement in education is a much needed outcome for India to remain competitive in the global sphere. This would require the education policy to acknowledge that context spans a wide range of aspects encompassing the size of the schools, their financial capabilities, continuous professional development of teachers and assessment of learning standards. It also needs to pave the way for greater transparency in decision making at the institutional and local level. These intricacies would help in robust implementation of interventions for a successful educational transformation.

It remains to be seen how the new policy can be implemented over the coming period. It will undoubtedly require careful monitoring to ensure maximum impact and effectiveness. 

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additional funds while these funds may be sitting idle in another scheme – leading to shortage of funds in some schemes and unspent funds in others. At the grassroots (institution level) the situation is even graver e.g. a Government school having classes I-XII will have to follow different norms (SSA, RMSA, MDM, State) for various interventions in the school and also maintain separate accounts for all schemes and provide separate monitoring related information to multiple authorities. These ‘multiple-structures’ can be seen from school level to the highest level (national level; MHRD).

Further, the current budget has made significant strides towards improving education in the tribal areas. The immediate implication of this could be

strengthening of the education sector in large parts of the country including North-Eastern States. The Budget speech also indicated that each State will have one government run medical college. The current budget gives boost to on-going efforts to address the issues of dropouts amongst the tribal students, particularly north-eastern students, by increasing outlay for post-matric and pre-matric scholarships. This increase is expected to benefit around 19 lakh and 20 lakh tribal students respectively. In addition to budgetary outlays, the emphasis on improving learning outcomes is a significant way forward towards improving the quality of education in North-Eastern States as the significant proportion of students in this region leave schools without acquiring minimum accepted level of learning.

