

Policy Brief: Multi-Sectorial Analysis of Growth Opportunities for North-East Region

Introduction

The Northeastern states of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura, face unique developmental challenges compared to the rest of India and require targeted policies to address these problems. There are three opportunities for growth and development in the region: human capital development, infrastructural growth and economic development. From developing transport connectivity to growing hydro-power to increasing the number of educational institutions, there exists tremendous opportunity in the region. This policy brief outlines the scope of development in some crucial sectors and prospective ways to develop them. These sectors were selected as key areas of focus on the basis of extensive research, analysis of available government data, and identification of areas in which Northeast Region (NER) is lagging behind the rest of the country.

Section I. Human Capital Investment

Issue: Education Infrastructure and Skill Development

The Current State

A. Demographic Demand

There is a large demographic demand for higher education and vocational training in the Northeastern states. Many Northeastern states have a higher literacy rate than the average Indian states, as the graph below shows. The gross enrollment ratio is generally high compared to the all-India average meaning that most school-age children are in school.

Despite the comparatively high level of education among people from the Northeast Region, there are a comparatively small number of institutions of higher education and vocational or technical training to attend. Interestingly though, there is enormously high unemployment in the Northeast Region: it is estimated that there will be an excess of 14

Literacy and Enrollment in the Northeast Region

State ▼	Literacy Rate 2011	GER, Upper Primary Level (2007-2008 and 2009-2010)
All-India Average	73	75.8
Arunachal Pradesh	65.4	115.15
Assam	72.2	83.58
Manipur	76.9	83.2
Meghalaya	74.4	83.46
Mizoram	91.3	104.75
Nagaland	79.6	88.34
Sikkim	81.4	94.54
Tripura	87.2	97.8

Source: Planning Commission; GER stands for Gross Enrollment Ratio

million job seekers in Assam in 2011-2022.¹ Thus, there is a rapidly growing demand for educational infrastructure that will support these job seekers

B. The relationship between growth and educational infrastructure

The availability of quality higher education programs, vocational training, and technical institutes has long been recognized as a pre-requisite to sustained growth and inclusive development.² According to a PWC report, “formal education and training are critical drivers of increased productivity and therefore economic development.”³ Moreover, the lack of availability of higher education reduces business investment and employment opportunities, leading to increased migration out of the Northeast to other states in India.⁴ To create long-term, sustainable growth in the Northeast Region, increasing the availability of postsecondary educations is necessary.

C. Availability of postsecondary education in the NER

According to the University Grants Commission, there are a total of 41 universities in Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura and Sikkim.⁵ Other reports have found that aspiring students confront numerous problems with the higher education landscape in the Northeast region: lack of adequate infrastructure and support, lack of quality teachers, funds, and job readiness courses.⁶ Moreover, most universities focus on the arts and social sciences; students interested in engineering or in attending a technical college are often forced to leave the region.⁷

Policy solutions

A. Greater public investment in postsecondary education

Though private players have developed some successful university partnerships in the Northeast, additional resources are required to fully develop higher education infrastructure.⁸ Currently, the inaccessible and remote terrain, poor physical infrastructure, and other barriers deter many private players from entering the education market in the NER. Other researchers have similarly found that it is critical that new programs provide training and credentials for high-employment fields. To address the lack of interest from private educational institutions and the general lack of suitable postsecondary infrastructure, the Government of India needs to create its own initiatives to increase the availability of high quality higher education, technical training, and vocational education for students in the Northeast.

B. Funding for skill development in alignment with high-growth industries

Focused development of vocational training institutes in high-growth fields will both decrease unemployment and increase investment in these states. For instance, analysts predict that the hydro and oil and gas industries will likely grow quickly in the coming years.⁹ There is an opportunity for the government to fund vocational institutes to provide maintenance, plant operation, and construction training. Similarly agriculture, tea, and flora and fauna continue to be major part of the economy, and investments in training will increase skills and participants’ ability to make profits from these businesses.

¹ https://www.pwc.in/en_IN/in/assets/pdfs/publications/2013/north-east_summit-2013.pdf

² <http://www.pwc.in/assets/pdfs/industries/education/publication/PWCreportRedefiningHigherEducation.pdf>

³ *Ibid.* page 8.

⁴ <http://www.pwc.in/assets/pdfs/industries/education/publication/PWCreportRedefiningHigherEducation.pdf>

⁵ http://www.ugc.ac.in/pdfnews/6022729_English-Report-2012-13.pdf; page 55.

⁶ http://theglobaljournals.com/paripex/file.php?val=March_2013_1363609761_829fa_29.pdf

⁷ <http://www.pwc.in/assets/pdfs/industries/education/publication/PWCreportRedefiningHigherEducation.pdf>

⁸ <http://www.pwc.in/assets/pdfs/industries/education/publication/PWCreportRedefiningHigherEducation.pdf>

⁹ https://www.pwc.in/en_IN/in/assets/pdfs/publications/2013/north-east_summit-2013.pdf

C. Opening up of centres of excellence

The core aim of this proposal is in line with the Vision 2020 document created in 2008 by the Government which declares that “A concerted effort to create centres of excellence (like IITs/IIITs/IIMs) through both public and private initiatives is essential to address the critical skill shortages, especially in higher and technical education for the region. Each State should have at least one such centre.”¹⁰

Section II. Infrastructure Development

Issue: Road Connectivity

The Current State

Most of the area in the NER is hilly and undulating with low population densities except the plains of Assam, parts of Tripura and valley areas of Manipur. As a result, roadways are the backbone of transport and communication in the NER. The road network per capita is significantly higher in the NER relative to the rest of the country, given the hilly terrain and the low density of population. However, a more accurate indicator of the ease of movement of passenger and freight traffic, the road length per unit area, is higher only in Assam, Nagaland and Tripura, and not in the other hill states. Thus, it can be concluded that road infrastructure is still relatively deficient in the NER states.

Road density, 2008

States	Road density per 1000 sq. Km	Road density per 1000 population
Arunachal	196.96	13.77
Assam	2936.51	7.83
Manipur	739.11	6.98
Meghalaya	438.67	3.89
Mizoram	292.11	6.35
Nagaland	1345.32	10.27
Sikkim	263.95	3.17
Tripura	3026.23	9.09
India	965.73	2.77

Source: Ministry of Road Transport & Highways

The Government has undertaken various road construction projects under various schemes like Special Accelerated Road Development Programme for North East (SARDP-NE) and Pradhan Mantri Gram Sadak Yojana (PMGSY). A lot of these projects have been delayed, resulting in cost overruns. Moreover, because of lack of maintenance, the existing roads in the region are in bad condition. The roads can be divided into three categories and a summary of them is listed below:

A. National Highways

¹⁰ <http://www.indianchamber.org/northeast/Vision2020.pdf> page vi.

While overall road density of the region may be lower than the national average, the length of National Highways in the NER for a given area as well as population, is much better than rest of India. The road density (km/1000 sq.km) is 39 compared to all India density of 23. Most of the national highways are two lane roads which get blocked during landslides in hilly areas.

B. State Highways, Inter-State Roads, Major District Roads & Other District Roads

These constitute the majority of roads in the region and are financed from a wide variety of projects and schemes of different ministries/ departments and the states' plan funds. These roads have deteriorated over time, requiring necessary maintenance and up gradation. Due to unavailability of maintenance funds, the quality of these roads has failed to improve.

C. NER-India Connectivity

Currently NER is connected to the rest of India through a narrow passage called '*Chicken's Neck*'. Poor quality of the roads on this route combined with its circuitous nature increases the distance and time to reach NER and as a result this is a major bottleneck to passenger and freight flow between NER and rest of India.

Policy solutions

While substantial investments for roads have flowed into the region, issues such as road network planning, maintenance, augmenting machinery, and process improvement have not received required attention. The emphasis has largely been on sanctioning new roads, neglecting maintenance of the existing ones, an undesirable situation further exacerbated by serious time and cost overruns. Following are some of the recommendations for strengthening road network in the region:

A. Expedite Execution of Sanctioned Roads

- i. *Form a separate body* under the aegis of DoNER to monitor the road construction activities in the region
- ii. Allocate additional funds for delayed road projects to cover cost overruns and thus ensure time completion

B. Connecting NER to rest of India

- i. *The construction of proposed NH 31D (Salsalabari – Ghoshpukur near Siliguri)* needs to be undertaken on an urgent basis as this road will link the North East with rest of the National Highway network
- ii. *Alternative routes from the North East to West Bengal* needs to be explored and developed so that the NER is not isolated during any future hostility or adverse weather conditions

C. Maintenance of Roads

- i. Use higher quality standards for construction of roads, so that maintenance needs are lower
- ii. Maintenance by contractors for first five years after the construction should be inbuilt into the road contracts
- iii. A policy decision to cover maintenance expenditure under the plan needs to be taken

Issue: Railways, Waterways and Airways Connectivity

A. Railways

In the hilly terrains of the NER it is difficult and expensive to setup rail networks. This accounts for the nominal presence of railway lines in hilly states like Arunachal Pradesh, Manipur, Meghalaya and Mizoram. As on April 2012, the rail

network in the NER comprises 2,661 km out of which 1,601 km are on Broad Gauge. After the gauge conversion projects on hand get completed by December 2014 only 20 km of metre gauge will remain. The project execution in the region has been slow due to difficult terrain, poor condition of law and order etc. Following are some recommendations to augment railway network in the region:

- New railway lines, one connecting Sittwe in Myanmar to Tirap in Arunachal Pradesh across Mizoram, Manipur and Nagaland and another line connecting Dhubri to Silchar via Meghalaya is considered essential to improve transportation in the region
- Railway should use its extensive knowhow of tunnel construction to reduce distances

B. Inland Waterways

Inland water transport can be a viable, cost-effective alternative in the plain areas of NER given the high cost of expanding other modes of transportation. Inland Water Transport (IWT) has a natural fit with the bulk commodities that the NER imports from and exports to the rest of India—tea, oil, cement and coal are exported; food grains, fertilisers, petroleum products are imported. The NER has about 3,839 km of navigable river routes. There are seven operational port locations in the state for import and export to the Kolkata and Haldia ports. There is an inland container depot (ICD) at Amingaon, 10 km from Guwahati, operated by the Container Corporation of India Ltd (CONCOR). Following are some recommendations to develop Inland Waterways as a major transport system in the region:

- Explore the possibility of extending Indo-Bangladesh Protocol on Inland Water Transit & Trade is for at least 10 years. This is critical for attracting investment in the sector
- Undertake multimodal transport planning in the NER in order to realize IWT's full potential
- Improve facilities for night navigation and mechanical handling
- Increase cargo vessels and terminals to meet the rising demands
- Promote Public Private Partnerships for the development of fairways and infrastructure in IWT

C. Airways

Air transport holds the key to not only linking NER to the rest of India, but also catalysing trade and commerce with the neighbouring countries. Air transport forms a very critical part of India's *Look East Policy*. Currently, the NER has only one international airport in Guwahati. Besides, Assam has six domestic airports. Meghalaya and Mizoram also have domestic airports. Moreover, there is a vast network of airports in the region built during World War II which are lying dormant. Following are some recommendations to develop airways transportation in the region:

- Bangladesh, Bhutan, Myanmar and Tibet should be connected to Guwahati in addition to Bangkok
- Explore the possibility of another international airport in the southern part of NER
- Explore the possibility of making dormant airports operative

Issue: Grid Connectivity and Power Generation

The Current State

The NER currently has an installed capacity of about 2,905MW and a demand for 2,251MW. Despite this excess capacity low plant loads make the region suffer from power cuts and require a large amount of power to be imported. The distribution of power is also exacerbated by weak connectivity between the North Eastern Grid and the Northern and Eastern Grids respectively. The North Eastern Grid itself has poor connectivity in the NER and limited carrying capacity.

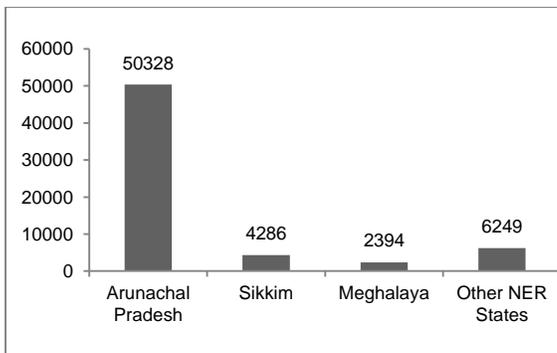
The NER's large installed capacity stems from vast natural gas reserves and hydroelectricity potential. However, the region faces a number of different issues in converting this installed capacity onto the grid for consumption.

- Land acquisition poses a problem due to inaccurate or incomplete data of land ownership and the resettlement of native tribes dependent on land and forests
- Obtaining clearances from the Ministry of Environment and Forests(MoEF) has become a major issue in the recent past, particularly in the NER which is rich in biodiversity
- Power projects require massive infrastructure backing, especially roads to transport heavy equipment, which is a constraint in the NER today
- Scattered demand in the region increases per unit cost of transmission in the NER, as compared to other parts of the country. Combined with a difficult terrain, hostile weather and a lack of qualified manpower, creates inadequate development of transmission and distribution (T&D) systems.
- Transnational rivers, which traverse multiple countries and a lack of proper agreements and disputes on water sharing, inhibit the utilisation of hydroelectric potential in the NER

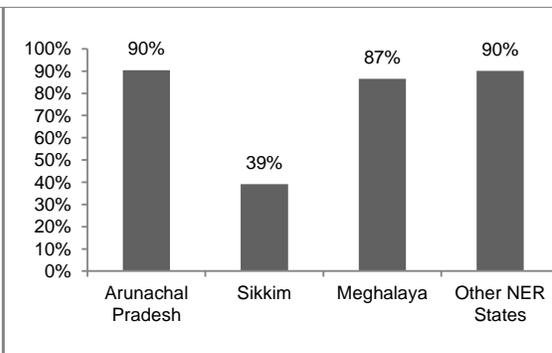
Hydro Potential

The NER, particularly within Arunachal Pradesh, Meghalaya and Sikkim, holds tremendous potential for hydroelectricity. This potential if harnessed would not only meet power consumption demand in the NER but also amount to a power surplus, available for export. Central Govt. policies, including the 50,000MW hydro initiative, Hydro Policy 2008 and the North Eastern Industrial and Investment Promotion Policy (NEIIPP) have attempted to spur investment in hydroelectric projects for the region through subsidies, tax exemptions, and cost waivers on infrastructure, transport, and power distribution. However, environmental concerns and bureaucracy have stumped regional power generation, perpetuating an overall power deficit in the region.

Identified Potential (MW)



Capacity Undeveloped



Source: PwC

Policy Solutions

A. Generation

Policies targeted to unblocking power generation bottlenecks could include resolving issues relating to plant operations at ONGC Tripura Power Project and expediting the completion of the Bongaigaon Thermal Power Project. Promoting renewable sources of energy such as wind and solar would also help increase power generation capacity in addition to

being aligned with policies of the MoEF. Promoting regional cooperation with countries such as Bhutan and Nepal would help promote the development of hydroelectric projects on shared water bodies.

B. Transmission

Tackling connectivity and carrying capacity of the North Eastern Grid would be foremost in resolving transmission issues. Increasing the carrying capacity of the link between the North Eastern Grid and the National Grid to 1000MW would help strengthen the supply of power in times of deficit. Further, incentivizing investments in power projects in the NER through tariff-based competitive bidding would ensure that projects come up with the most competitive tariffs and become operational within two-three years.

Section III. Economic Development

Issue: Industrial Development

The Current State

Before Independence, the NER was among the most industrially development regions in the country. The industrial sector was based mostly on the rich resource endowments of the region. Tea plantation and tea manufacturing, plywood manufacturing, coal mining and oil refining were some of the prominent industry segments. Furthermore, the British set up one of their earliest railway lines in the region which ran between Dibrugarh and Chittagong. Transport through railways, roads and inland waterways remained fairly developed and enabled trade, both within and outside the region.

However, today after six decades of independence and even with a fairly wide resource base, the region remains among the most underdeveloped areas in the country. Despite special assistance schemes of the government, the states in this region have largely remained laggard in comparison to the other states of the country. They have registered an annual average growth rate of 6.9% since 2005-06, which is below the national average of almost 8%. In 2004-05, the region's contribution to the overall national GDP was about 3% but now stands at mere 2.66% (in 2011-12).

Further, there have been wide disparities in growth recorded across the eight states. Some states such as Meghalaya, Mizoram and Tripura have grown in sync with the overall GDP growth of the country. However, others such as Manipur, Assam and Nagaland have seen only moderate growth. This differential in economic performance is also reflected in the per capita income of the states. Per capita income in Arunachal Pradesh, Meghalaya and Sikkim have exceeded the all-India average level but others such as Assam, Manipur and Mizoram have per capita income much below the average for India.

There has not been much growth in large-scale industries and the industrial sector in the region primarily consists of small and medium enterprises. Most of the large industries are based in Assam and are in sectors such as refining, cement, chemical and fertilisers, paper and paper products. Also food processing is one of the fastest growing segments in the region. Detailed studies on the north east region, assessing major impediments to industrial growth in the region reveal that industrial units in the region face constraints in the form of land acquisition, availability of power, transport and logistics, credit disbursal, skilled labour, marketing and taxation issues. Lack of physical and industrial infrastructure facilities have been a significant roadblock for small and medium enterprises in the region as it impacts both movement of goods and people in the region.

Policy Solutions

The limited industrialisation that the region has so far seen has been centred around a few resource-based industries such as petroleum and natural gas, tea, coal, jute, forest products, some mineral based industries and some micro household industries such as handloom and handicrafts. The organised sector includes tea, petroleum, paper, cement, plywood, coal, jute, sugar and a few others while the unorganised sector represents a majority of enterprises in the region and includes the handloom and handicrafts, small food processing units, etc. By far the most important industries in the region are the tea and petroleum industries.

Development Nodes

As a way ahead, the first step to attract industries is to improve the industrial, transportation and support infrastructure. In this regard, according to FICCI, one possible solution is to set up development nodes at strategic locations along the transportation corridors and also the feeder corridors. FICCI has identified 53 development nodes to be set up across the region in tandem with the development of highways and railways. Once set up, these development nodes will create alternative urban areas, trade and business, and create job opportunities for people in the surrounding areas. The potential locations for development nodes are listed in the table below:

These facilities will also make improved social infrastructure facilities accessible to rural population in the influence areas. Infrastructural development along these development nodes is expected to bring in cumulative investments of 42,500 crore INR over the next 15 years. The identified nodes can be developed as 100-acre nodes with industrial townships. While 70% of the area will be allocated for industries, the remaining 30% will be used for developing social infrastructure. The cost of providing basic infrastructure such as power, water, internal roads, sewerage and drainage networks, street lights, effluent transmission and solid waste management has been estimated at 50 crore INR per 100 acres.

State	Locations			
Arunachal Pradesh	1.	Bhalukpong	5.	Tezu
	2.	Bomdila	6.	Daporizo
	3.	Sela	7.	Zero
	4.	Pasighat		
Assam	8.	Srirampur	16.	Charduar
	9.	Krishnai	17.	Bokajan
	10.	Bijni	18.	Silonijan
	11.	Darranga	19.	Amguri
	12.	Udalguri	20.	Makum / Dumduma
	13.	Sonapur	21.	Kalain
	14.	Balipara	22.	Karimganj
	15.	Koliabor	23.	Jirighat
Manipur	24.	Mao Gate	27.	Oinamlong
	25.	Palel	28.	Churachandpur
	26.	Ukhrul		
Meghalaya	29.	Nongpoh	32.	Baghmara
	30.	Ladrymbai	33.	Tura
	31.	Nongstoin	34.	Phulbari
Mizoram	35.	Kolasib	38.	Champhai
	36.	Serchip	39.	Saiha
	37.	Lunglei	40.	Mamit
Nagaland	41.	Mokokchung	45.	Wakching
	42.	Piphema	46.	Bhandari
	43.	Wokha	47.	Naginimara
	44.	Tuensang		
Tripura	48.	Dharmanagar	51.	Bishalgarh
	49.	Manu	52.	Satirbazar
	50.	Teliamura	53.	Sabroom

Source: FICCI analysis

Issue: Boosting Tourism

The Current State

A. Low share of tourism, high year-on-year growth

The eight countries in the Northeast Region all have high tourism potential, given the cultural diversity a unique landscape.¹¹ Though there have recently been significant growth in tourism all Northeastern states, low road connectivity, remoteness, perceptions of low public safety and other factors remain barriers.¹² The absolute share of domestic tourism is extremely low for all Northeastern states: Assam is the highest at 0.49%, while none of the others are greater than 0.1%. Thus, there appears to be great scope for increasing tourism to all of these states.

Domestic Tourism in the Northeast Region

State ▼	% share of domestic tourism, 2012	average % year-on-year growth, 2010-2012
Arunachal Pradesh	0.03	24.27
Assam	0.49	10.48
Manipur	0.01	4.93
Meghalaya	0.08	9.72
Mizoram	0.01	6.83
Nagaland	0	11.56
Sikkim	0.07	8.73
Tripura	0.04	3.48

Ministry of Tourism data

B. Tourism as a development strategy

The growth of tourism creates jobs in a range of industries, especially hospitality.¹³ Jobs in the tourist sector are often well-paying, too, making its development all the more valuable. As the Vision 2020 report concludes, “[I]n the services sector, there is considerable potential for expanding tourism including high-value tourism such as hill and adventure tourism.”¹⁴

Policy Solutions

A. Hospitality infrastructure

The Government should support investments in hotel schools and other hospitality training programs to increase the availability of tourism-related infrastructure. These institutions will facilitate the natural development of an organized tourism sector. Given the high levels of education in the Northeast region discussed elsewhere in this report, hospitality training would leverage this human capital.¹⁵

¹¹ http://himalaya.socanth.cam.ac.uk/collections/journals/ebhr/pdf/EBHR_32_07.pdf

¹² www.business-standard.com/article/economy-policy/centre-to-give-big-push-for-tourism-in-north-east-113010900216_1.html

¹³ https://www.pwc.in/en_IN/in/assets/pdfs/publications/2013/north-east_summit-2013.pdf

¹⁴ <http://www.indianchamber.org/northeast/Vision2020.pdf> page 18.

¹⁵ https://www.pwc.in/en_IN/in/assets/pdfs/publications/2013/north-east_summit-2013.pdf

B. Planning and promotion in alignment with Vision 2020

Policy should also focus on strategic development of tourism, meaning focused investment on building certain activities or attractions along with promotion of these tourism focus areas. As the Vision 2020 document recommends, “The focus should be on high-value tourism which will require close collaboration with the private sector hospitality industry, building high-quality infrastructure and well-targeted promotion.”¹⁶ Analysts have suggested focusing on adventure activities or nature-based tourism. More important than the particular type of tourism, though, is the development of a strategic plan to build the tourism industry from the government.

Issue: Trade Opportunities

The Current State

Established in the 1990’s, India’s Look East Policy was developed with a view to cultivate economic and strategic relations with ASEAN member nations. Following the 12th ASEAN Summit, Prime Minister Narendra Modi announced the up gradation of this policy to “Act East”, stressing India’s commitment to ASEAN nations and a need for greater integration. This renewed focus towards our neighbors in the East holds great potential for opportunity for NER.

The NER is strategically positioned between three economic ecosystems, namely East Asia, Southeast Asia and South Asia and represents the figurative gateway for India’s increased economic integration with ASEAN. A key facet of such economic integration is cross-border trade, however, over the past two-decades, despite the intentions of the Look East Policy and booming trade with ASEAN, the NER has been largely left out of the equation. In a 2013 report by PwC, a global professional services organization, it was estimated that despite India’s export volume totaling \$245.4 billion the NER only contributed to about \$0.01 billion of the pie. Exports from the NER have largely constituted primary products such as coal, limestone, tea and fruits.

NER Exports as a Share of India’s Exports (Rs. Crore)

Year	NER Exports	India Exports	% Share
2008 - 2009	777	8,40,755	0.09%
2009 - 2010	985.41	8,45,534	0.12%
2010 - 2011	861.42	11,42,922	0.08%
2011 - 2012	1242.37	14,65,959	0.08%
2012 - 2013	1540.14	16,34,319	0.09%

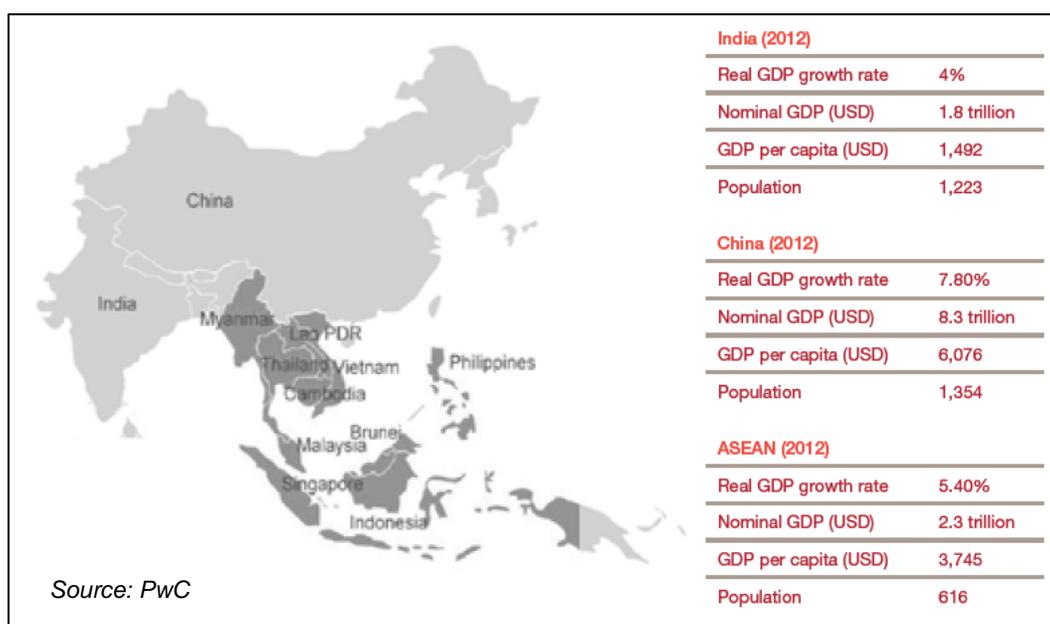
Source: Planning Commission of India

The ASEAN bloc comprising of ten countries has an aggregated economic size of \$2.3 trillion. It is the third pillar of economic growth in Asia, following China and India. ASEAN countries have long sought to establish economic integration with India and China through increased trade, labor mobility and capital transfers. Between 2013– 14, bilateral trade

¹⁶ <http://www.indianchamber.org/northeast/Vision2020.pdf>

between India and the ASEAN countries along with China, Nepal, Bhutan and Bangladesh had been estimated at around \$152 billion and is expected to cross \$1000 billion USD by 2035. This environment and potential for bilateral trade expansion provides immense opportunity for the NER as a trading hub and key checkpoint between ASEAN, China and India.

Economies of ASEAN, India and China



Why the North East?

A. Geographic Location

The NER shares borders with Bhutan, China, Myanmar and Bangladesh, spanning an international border of over 4,500 kms. This strategic positioning of the NER provides access to markets serving over 2.8 billion people, 40% of the world's population, which situates it in the ideal position to serve as a trading hub.

B. Cost Advantage

With India's growing trade with ASEAN and China there are tremendous savings opportunities from developing the NER as a production center and centralized trading hub. Today, India's exports to ASEAN and China inevitably transport by sea from ports in Tamil Nadu and Orissa. Developing road and rail links to ASEAN, through the NER would substantially cut logistics costs for the majority of exporters and provide an incentive to trade through the NER.

Policy Solutions

A. Border Haats

Border markets are an innovative solution to increasing local bilateral trade and reducing illegal cross-border activity by establishing income sources for local populations. This model has been floated between Bangladesh and India, who stand to gain an additional \$20 million in annual trade from such border markets. Haats are set up within five kilometers on either side of the international border, with no local tax impositions. Currencies from both countries are to be accepted and

local vendors can sell agricultural and horticultural products, fresh and dry fish, dairy and poultry products, cottage industry items, wooden furniture, handlooms and handicrafts.

B. Road and Rail Connectivity

Increased connectivity is central to developing the NER as a central trading hub. For instance, the planned trilateral highway linking India, Myanmar and Thailand is an example of increased regional integration and a step forward towards boosting trade between India and ASEAN. The 3,200km highway, which would drastically enhance connectivity between the Mekong sub-region and India, is currently expected to be ready by 2018, about two years behind schedule. The recent focus given to this project by PM Modi may prove to be a game-changer for the NER and is an important component of the government's "Act East" policy. The highway project, which is to run from Moreh in Manipur to Mae Sot in Thailand via Mandalay in Myanmar, will ensure that India's eastern border is opened to a new bus route, which would enable travelers to board a bus from Imphal and reach Mandalay in just over 14 hours.

C. Additional Channels to Aid Trade

Trade conducive policies such as excise duty, import and export taxes are initially required to establish incentives and build momentum to the increasing bilateral trade through road and rail routes converging in the NER. Investment in border checkpoint infrastructure and manpower would also be required to regulate and monitor these improved trade routes. Furthermore, organizations such as the Bangladesh–China–India–Myanmar Forum for Regional Cooperation (BCIM) should be leveraged in designing and implementing plans for a trading hub in the NER.

Issue: Agricultural Productivity

The Current State

Currently, agriculture provides livelihood to 70% of the region's population and it remains a predominant economic activity in the northeast. Though the contribution of agriculture to the GDP for the region has fallen from 20.9% in 2004-05 to 17.2% in 2011-12, it is still relatively high in comparison with the national figures. As an illustration, in Sikkim 89% of the population is dependent on agriculture and in Mizoram, around 51% of the population continues to live in rural areas and is dependent on agriculture.

NE state	Rice		Wheat		Cereals		Pulses		Food grains		Oil seeds	
	Prod	Share(%)	Prod	Share(%)	Prod	Share(%)	Prod	Share(%)	Prod	Share(%)	Prod	Share(%)
Arunachal Pradesh	163.9	0.17	5.2	0.01	77.7	0.19	9.0	0.06	255.8	0.11	30.5	0.11
Assam	4008.5	4.04	54.6	0.07	15.4	0.04	64.5	0.44	4143.0	1.77	137.9	0.50
Manipur	397.0	0.40	-	-	11.5	0.03	6.5	0.04	415.0	0.18	0.7	0.00
Meghalaya	203.9	0.21	0.7	0.00	27.8	0.07	3.9	0.03	236.3	0.10	7.1	0.03
Mizoram	46.0	0.05	-	-	9.3	0.02	3.6	0.02	58.9	0.03	2.5	0.01
Nagaland	345.1	0.35	2.1	0.00	127.3	0.32	39.7	0.27	514.2	0.22	71.5	0.26
Sikkim	21.7	0.02	7.8	0.01	66.2	0.17	11.8	0.08	107.5	0.05	7.4	0.03
Tripura	627.1	0.63	1.2	0.00	2.0	0.00	4.4	0.03	634.7	0.27	2.5	0.01
NE Region	5813.2	5.9	71.6	0.1	337.2	0.8	143.4	1.0	6365.4	2.7	260.1	0.9
All India	99182.4	100	80679.4	100	40037.9	100	14566.7	100	234466.4	100	27719.0	100

Note: Production in thousand tonnes

Share % share in all India production

Source : Agricultural Statistics at a Glance, Ministry of Agriculture, Government of India.

The North-East Region (NER) has several unique features – fertile land, abundant water, high and dependable rainfall, mega biodiversity and agriculture-friendly climate. In spite of the vast potential for agriculture, horticulture and forestry, the

region has been a laggard in agricultural development. Reasons include a lack of appropriate strategies for development of natural resources, inadequate infrastructural facilities and low adoption of improved technology. Additionally, due to large forest cover for each of the states, the area of land available for agriculture is limited underscoring the low productivity of the region. All these have led the states being a net importer of food grains even for their own consumption.

Policy Solutions

A. Focus on Non-Farm Activities

Rubber and bamboo are among important agricultural produces which attract lot of investment. Tripura, also called the 'second rubber capital' of India, has the potential to produce 10,000 hectares of rubber. Given that globally India ranks third in production and fourth in consumption of rubber, it creates a market for investors. Other rubber producing states such as Mizoram and Assam can also be developed as possible investment destinations.

The NER region also produces substantial percentage of bamboo, accounting for 65% of India's production value with Mizoram alone contributing to 40% of the country's bamboo production.¹⁷ Given that the demand for Bamboo is almost double of current production, there is a need to improve the productivity of Bamboo resources available here. The expansion has been handicapped by lack of scientific methods of propagation and cultivation, lack of post-harvest treatment and technology for product development. It is important to address these shortfalls to leverage on the strengths of the region and subsequently increase the investment potential

B. Agro-Processing

The region's comparative advantages in producing fruit, vegetables and other products (chilli, ginger, mustard seeds) can be tapped for providing rural employment by setting up small-scale processing units for the local market which will also boost rural employment. This set up is economically viable as the processing units require minimal investment.

For example, Arunachal Pradesh has taken up the cultivation of horticulture produce on a large scale with the assistance from the government. In Manipur, organic farming is the most sought-after practice and the state government has given impetus to farming for pineapple, mushroom etc. With proper processing, many of the agri-horticultural crops of the state look promising for the export. In Nagaland, the Nagaland Food Private Limited (NFPL) established an industrial estate that specializes in bamboo shoot processing, pineapple, passion fruit.

There is also scope for dairy processing and poultry, fishery processing in the region. There is a lot of demand for dried fish in the region, processing of which is not capital intensive. The National Dairy Development Board (NDDB), which has extensive experience in mobilizing producers in milk, vegetables as well as other areas, could play a key enabling role in this process. Private entrepreneurs need to be encouraged to set up storage, distribution and marketing infrastructure such as a cold storage chain along major arterial highways. This will help exploit the horticulture potential of the region and bring perishables speedily to marketing hubs. For cold chain operations, a public-private partnership (PPP) or lease could also be explored. Similar initiatives can already be seen in Meghalaya and Mizoram where flowers are being distributed outside the region by a private distributor, Zopar, which also supplies seed varieties to farmers.

¹⁷"India's North-East Diversifying Growth Opportunities", A report by PWC and Indian Chamber of Commerce

C. Plantation Crops

Coffee: While the programme implemented by the Coffee Board has sensitized tribal people to coffee cultivation methods, there is a need to generate supplementary income. States need to cooperate with Coffee Board for raising coffee plantations in clusters particularly in Nagaland and Mizoram which hold maximum potential. As a way ahead, Coffee Board could also provide infrastructure support for processing of produce.

Tea: NER accounts for 55 per cent of area under Tea and 53 per cent of total production. Assam and Tripura have been the traditional tea growing states supplemented by production from rest of the states in NER. But the industry has been impacted by constraints such as manpower (limited availability of skilled manpower), system of landholding (community ownership of land leading to difficulty in determining of ownership), Connectivity (challenges in movement of inputs). In line with the vision 2020 document for Development of North East, the following are some steps which need to be implemented as a way forward:

- a. Replanting that holds the key to the long term competitiveness of the Indian Tea industry
- b. Focus on Quality assurance certifications
- c. Implementation of field schemes for replanting and rejuvenation, irrigation and drainage
- d. Labor welfare measures like drinking water, sanitation etc.
- e. Extensive support for export and domestic promotion schemes in addition to Research & Development

Conclusion

The Northeast Region of India holds tremendous opportunity to develop and contribute to the nation's progress, in addition to playing a central role in India's foreign policy to the East. However, a series of policy implementations and a rigorous focus on implementation is required to substantially change the growth trajectory of the region.