BRIEFING PAPER

#6/2022

Role of Northeast Indian States in Shaping India's Logistics Performance

Joining Dots • Connecting People • Shared Prosperity

#6/2022

Bijaya Roy and Mihir Shekhar Bhonsale*

For a country the size of India, logistics efficiency and connectivity are critical for sustainable economic activities. Recognising the salience of logistics, the Union Government has notified the National Logistics Policy, 2022. It is implementing the PM Gati Shakti Master Plan to bring efficiency in logistic services and human resources and integrate infrastructure and network planning.

India's States and Union Territories have a pivotal role in logistical planning and development. This Briefing Paper tries to chart the logistical and connectivity situation in the Northeastern States of India. It attempts to identify the potential of the Northeastern States in terms of trade (both domestic and international), bottlenecks towards improving the state's logistic landscapes, initiatives to improve the logistic ecosystem, and discusses the scope and opportunities to improve its logistic performances.

Background

Logistics is an essential enabler of both domestic and international trade. Logistics efficiency boosts the overall competitiveness of various sectors of the economy. It ensures inclusive growth for all segments of society and business, including micro, small, and medium enterprises (MSMEs), farmers, and so on.

India has improved its Logistic Performance Index rank – 44th of 160 countries, as per the World Bank Logistics Performance Index 2018. The position can further enhance by optimising border procedures

* *Bijaya Roy is Senior Research Associate, CUTS International and Mihir Shekhar Bhonsale is Assistant Policy Analyst, CUTS International*

(i.e., speed, simplicity and predictability of formalities), reducing clearance time, and improving infrastructure quality (e.g. improving roads, rail and ports, developing intermodal hubs, digitisation, and technological advancements).

The 'PM Gati Shakti Master Plan' launched in October 2021 provided the much-needed impetus for integrated infrastructure and network planning, envisioning the development of holistic infrastructure in the country by increasing coordination among the Centre and state agencies.

The National Logistics Policy (NLP), 2022, notified by the Union Government, complements the Gati Shakti Master Plan. The NLP emphasises the efficiency of services and human resources with a target to bring down logistical costs and make them comparable to global standards. The policy outlines national priorities for the logistics sector, provides a unified policy environment, and serves as a key policy instrument to deliver the vision of 'Atmanirbhar Bharat'.

States in India play a crucial role in integrating the small-haul corridors and are responsible for enforcing and administering laws and regulations that govern key logistics activities, such as road transport and warehousing.

Given this background, this paper seeks to understand the connectivity and logistic situation in India's Northeastern Region (NER), comprising Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura and Sikkim. It also recognises its potential in trade (domestic or international), bottlenecks towards improving its logistic landscapes, initiatives to improve the logistic ecosystem and identifies the scope and opportunities to improve the logistic performance in these states.

Overview of Connectivity and Logistic Initiatives in NER

Snapshot of Connectivity

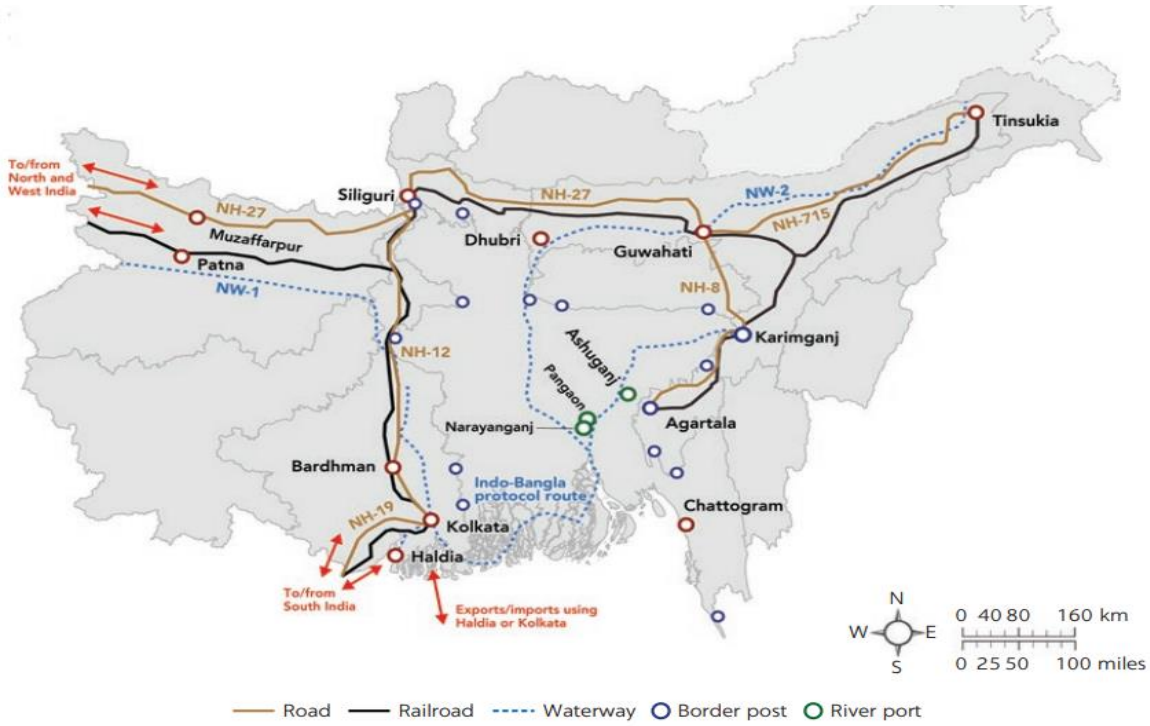
The NER, which forms the easternmost border of India, comprises eight largely hilly states viz. Arunachal Pradesh, Assam, Mizoram, Meghalaya, Manipur, Tripura, Sikkim and Nagaland. The NER constitutes about 8 per cent of India's total geographical area. Its population (all eight states combined) is approximately 40 million (2011 census), which represents 3.1 per cent of the total Indian population (1,210 million).

The NER share international borders of 5,812 km with the neighbouring countries of China (1,395 km), Bhutan (455 km), Myanmar (1640 km), Bangladesh (1,596 km) and Nepal (97 km), which is about 99 per cent of NER's geographical boundary. These eight states have several border crossings with neighbouring countries (Box 1).

Box 1: Major Border Crossings	
NER-Bangladesh	Agartala (Tripura), Sutarkandi (Assam), Srimantapur (Assam), Karimganj (Assam), Steamerghat (Assam), Dhubri (Assam), Dalu (Meghalaya), Dawki (Meghalaya), Agartala (Tripura), Sabroom (Tripura)
NER-Bhutan	Darranga (Assam); Hatisar (Assam)
NER-Myanmar	Moreh (Manipur)

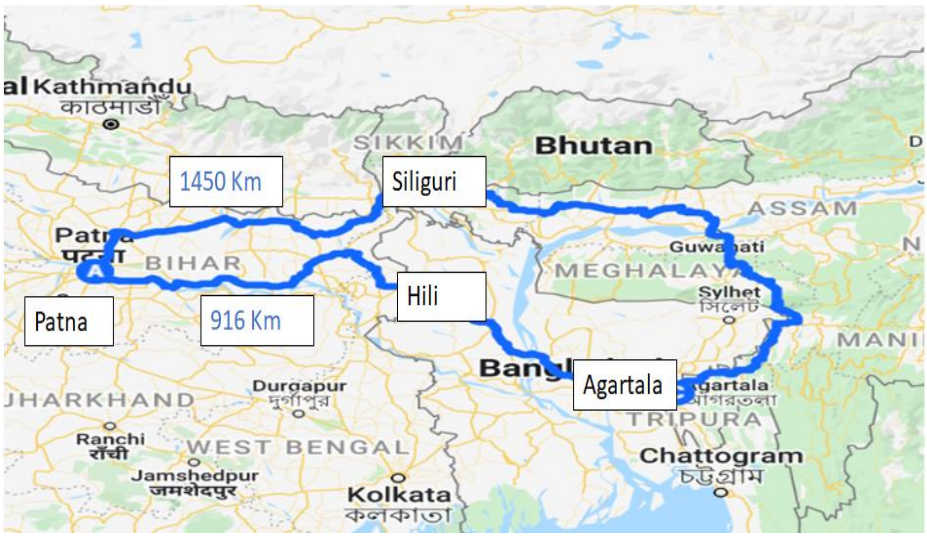
NER is connected to the rest of India through roadways, railways and inland waterways. But, the connectivity through roadways and railways is through a narrow stretch of 22 km (called chicken's neck) which encompasses hilly terrain, steep roads and multiple hairpin bends (roadway, railway, and waterways links depicted in Figure 1). The distance by roadways from mainland India to NER through Siliguri is about twice the distance from mainland India to NER through Bangladesh (as depicted in Figure 2). However, since vehicles from India and Bangladesh are now allowed to cross borders, Indian vehicles from the rest of India must travel to NER through the narrow chicken-neck Siliguri Corridor.[1]

Figure 1: Connectivity Network in Northeast India



Source: Herrera Dappe, Matias; Kunaka, Charles (2021).

Figure 2: Route from Agartala to Patna through Siliguri and Bangladesh



Source: Prepared by authors using google maps

For access to the sea, NER uses Kolkata/Haldia port through Bangladesh. Two National Waterways in NER- NW2 (Dhubri-Sadiya) and NW 16 (Lakhipur-Bangra) connect to Bangladesh. These national waterways connect NER to the rest of India through the India-Bangladesh Inland Waterways Protocol Route. In addition, these are also used for trading between Bangladesh and NER and third-country trade through India (such as Dhubri river port in Assam used for trade by Bhutan and Bangladesh). Recently, the Daudkandi-Sonamura stretch on the Gumti river has been declared a new protocol route connecting Bangladesh to Tripura.

A Memorandum of Understanding (MoU) for using Chattogram and Mongla Ports has also been signed between India and Bangladesh to reduce the logistic cost of the trade from NER and improve the trade competitiveness of NER states. The agreed routes are from Chattogram/Mongla port to/from Agatata/Dawki/Sutarkandi/Srimantapur via Akhaura/Tamabil/Sheola/Bibirbazar, respectively.

Another project, namely Kaladan Multi-modal Project, will connect NER to ROI. The project is expected to provide and improve connectivity between Mizoram and ROI through Myanmar (see Box 2).

Box 2: Kaladan Multi-modal Transit Transport Project – Connecting ROI to NER

The shipping distance from Kolkata (Calcutta) Port to Sittwe Port in Rakhine is 539 km across the Bay of Bengal. From Sittwe to Paletwa by inland waterway is 158 km. From Paletwa to the Indo-Myanmar border by road will be 110 km. And from Zorinpui on the border to Lawangtlai in India is 100 km by road. The journey from Haldia Port near Kolkata to Lawangtlai in Mizoram through the Siliguri Corridor is 1,880 km. When the Kaladan Project becomes operational, the distance will be reduced to 950 km. Goods can be transported to Mizoram through the multi-modal transitway, from where existing NH 54 connects to Assam and other NER states of India.

Source: Text adopted (modified) from Subir Bhaumik (2020), The India-Myanmar Kaladan Project: Vision and Reality

The Kaladan multi-modal project aims to provide alternative connectivity to the NER from the Kolkata/Haldia port through Sittwe Port-Kaladan river up to Paletwa in Myanmar by waterway and Paletwa to Zorinpui by Road in Mizoram and provide an alternate route between the landlocked Northeast and the rest of India.

Besides, there are a total of 16 airports in the NER. Each state in NER has air connectivity and three international airports – Guwahati, Imphal and Agartala. Besides, Bagdogra and Kolkata airports in West Bengal also cater to international freight or passenger movement to/from NER.

The Ministry of Ports, Shipping & Waterways has conceptualised a plan to develop the Eastern Waterways Connectivity Transport Grid (comprising four key waterways and certain international routes) of about 5,000 km of navigable waterways. This will boost regional integration and trade with South Asia [Bangladesh, Bhutan, India & Nepal (BBIN)] and Eastern South Asia (including Myanmar and countries like Singapore, Malaysia & Thailand).

Box 3: Connectivity and Development Initiatives in NER

Existing

- Tlwang (Dhaleshwari river) in Mizoram was declared National Waterway 102 to facilitate trade between Mizoram and Assam.
- Integrated Customs & Immigration Check Post established at Zorinpui in Lawngtlai district of Mizoram to facilitate Kaladan multi-modal project.
- Zokhawthar Land Customs Station was established to facilitate cross-border trade between Mizoram and Myanmar (not operational).
- Four Border Haats (Tripura and Meghalaya)
- Inland Container Depot (ICD) in Amingaon, Assam
- Integrated Check Post (ICP) at Agartala, Moreh, Sutarkandi and Srimantpur
- Longest rail-cum-road bridge Bogibeel Bridge commissioned in Assam on the Brahmaputra river.
- Airport at Holongi near Arunachal Pradesh's capital Itanagar

Ongoing

- 136 km new rail line (Bogibeel bridge with linking lines between Dibrugarh and North Bank line, and Agartala – Sabroom New line) and 113 km Doubling (Lumding – Hojai patch) have been commissioned.
- Four laning of Dimapur- Kohima road (62.9 km) in Nagaland; 4 laning of Nagaon bypass to Holongi (167 km) in Arunachal Pradesh; Alternate two-lane Highway from Bagrakote to Pakyong (NH-717A) (152 km) in Sikkim; 2 laning of Aizawl – Tuipang NH-54 (351 km) in Mizoram; Four laning of Imphal – Moreh section of NH-39 (20 km) and 2-laning of 75.4 km in Manipur.
- Improvement of National Waterway-2 (River Brahmaputra, 891 km) Sadia to Bangladesh Border and National Waterway-16 (River Barak, 121 km) Bhanga-Lakhipur stretch, including Indo-Bangladesh Protocol (IBP) route.
- Multi-modal Logistics Park (MMLP) at Jogighopa, Assam
- Foundation laid for 13 highway projects in Mizoram
- One multisector SEZ is being established at Jalefa in Sabroom
- Border Haats sanctioned at six locations
- 48 km of a new railway line between Abhayapuri and Gauripur in Dhubri district, Assam
- Bridge connecting Dhubri (Assam) to Phulbari (Meghalaya)
- East West Corridor (Srirampur to Silchar)[2]

• Railway gauge conversion (Lumding-Silchar and Rangia-Murkongselek), new railway lines (Jiribam-Tupul-Imphal) • Renovation and upgradation of existing terminals at Karimganj and Badarpur • Road construction in all the NER states under Bharatmala Pariyojana
Proposed
• To develop river Tuipui between the Bangladesh border and Tuitong village in Mizoram to facilitate trade between Mizoram and Bangladesh • Logistic Park at Sabroom in South Tripura District • ICPs at Sabroom, South Tripura and Nischintapur, West Tripura

The increasing strength of logistics infrastructure in eight NER states is demonstrated through 16 air cargo terminals, more than 2.5 lakhs MT cold storage capacity and a rapidly growing road and rail infrastructure (CII).

Box 4: Transport of Goods to and from NER via Rail, Water and Air in 2020-21 (in tonnes)

Mode of Transport	Outward movement from NER states	Inward movement to NER states
Railways	23,60,143.60	1,75,42,608.40
Waterways	0	1,755
Airways	6,889.13	17,759.95

Source: Directorate General of Commercial Intelligence and Statistics

Note: In Assam, 2,06,127.4 tonnes of cargo were moved internally through inland waterways.

The Union government has taken several initiatives to improve road and rail connectivity in NER. In the case of railways, it is found that between 2014 and 2022, a total of 893.82 km of track have been converted to broad gauge, 386.84 km of new lines added, 356.41 km of double lines commissioned and a survey of 1,578 km of new lines was completed (NEFR, 2022).

The railway network already connects the state capitals of Assam, Tripura and Arunachal Pradesh with broad gauge lines. The state capitals of Manipur, Mizoram and Meghalaya are expected to be connected by broad gauge by 2023. Kohima, the state capital of Nagaland, is expected to be connected by 2026 (NEFR, 2022).

The upcoming four-lane East-West corridor, stretching over 670 km in NER, will likely improve the regions' trade with the rest of India. The ASEAN highway network, stretching over 306 km in NER, will likely provide greater trade and social connections through roadways (ASCELA).

Snapshot of Logistic Initiatives

- **Logistics Policy:** Assam has formulated the Assam Logistics and Warehousing Policy, 2022, to make Assam a regional logistics hub and augment the state's economic development. The states of Manipur and Mizoram have also devised their logistics policies. Meghalaya covers specific logistics through Meghalaya Industrial and Investment Promotion Policy (MIIPP) 2012. Tripura and Sikkim are also preparing a dedicated policy for logistics and State Logistics Master Plan.

- **Institutional Mechanism for Logistics:** Assam's Logistics and Warehousing Policy mentions that the state will set up a dedicated Logistics Division headed by a Secretary rank officer under the Department of Industries and Commerce, Government of Assam (Assam Logistics and Warehousing Policy, 2022). The dedicated division will ensure better coordination between departments, including various related departments, and be a nodal agency for implementing and monitoring the policy.

  Northeastern states of Tripura and Manipur have set up a robust institutional mechanism for logistics – appointed nodal officer for logistics, constituted State logistics cell, and State Logistics Coordination Committee. Nagaland has appointed a nodal officer for the logistics sector. Assam, Meghalaya and Arunachal Pradesh have initiated the institutional setup for logistics and appointed nodal officers for logistics (Ernst & Young, 2021).

- **Facilitation and Incentivisation:** Assam has a single-window mechanism for hassle-free processing of approvals for setting-up logistics facilities. Tripura's incentive scheme, effective from April 01, 2022, incentivises investments in the logistics industry to attract private investments (Ernst & Young, 2021).

- **Road Development:** The Ministry of Road Transport and Highways has adopted the Special Accelerated Road Development Programme (SARDP-NE) to develop road networks in the NER states. This programme envisages providing road connectivity to all the district headquarters in the NER by minimum two-lane highway standards, apart from providing road connectivity to

backward and remote areas, areas of strategic importance and neighbouring countries (Tulsiani, 2018).

The Logistics Ease Across Different States (LEADS) Report 2022, a data-driven index published by the Ministry of Commerce and Industry, lists the position of all 36 states and territories in logistics performance, encompassing logistics infrastructure, services, and human resources. As per the LEADS 2022 Index, Nagaland and Assam lead the category of 'Overall logistics services' in the Achievers segment. Nagaland has been rated high in every sub-category indicator of the quality of logistics services. Arunachal Pradesh and Manipur feature in the Aspirers segment mainly because of low ratings in the 'Reasonableness of prices and timeliness' indicators.

Assam's grading into the 'Achiever'[3] category has been a significant achievement for the state, from the previous- LEADS 2021 index, when it was ranked 21st i.e. at the bottom of the chart, due to its poor performance in all indicators of Infrastructure, Services, Operating and Regulatory Environment (Ernst & Young LLP, 2022).

The available logistics infrastructure is expected to get a major boost from the National Logistics Policy, 2022 (NLP), which seeks to provide support for the development of state/city level logistics plans, set up an institutional framework to take action at the city/state level, measure and monitor action by states and rank them. It is expected to guide states and union territories in formulating and implementing their respective logistics policies and help improve the ease of doing business on the ground (Department for Promotion of Industry and Internal Trade, 2022).

The Union Government's Comprehensive Logistics Action Plan (CLAP) highlights the lack of a system for continuous measurement of state-level logistics performance as a major problem (Department for Promotion of Industry and Internal Trade, 2022). The NLP seeks to fill this gap and drive reforms in collaboration with states to achieve these crucial goals. (Banerjee, 2022).

The NLP will thereby strengthen logistics services and systems. Meanwhile, the PM GatiShakti National Master Plan will focus on creating and improving multi-modal logistics infrastructure in coordination with States/UTs and their agencies under one common platform unifying all decision-making levels by removing silos.

Overview of NER's Trade and Tourism Potential

NER is gifted with diverse agro-climatic conditions and produces several crops. Some of the crops grown in this region are unique to NER. For example, NER's Lakadong turmeric yields higher curcumin content, NER's bird's eye chilli yields higher capsaicin content, NER's ginger yields more oleoresins than other regions. Various products, such as Naga Tree Tomato, have obtained Geographical Indication (GI) certificates.

Table 3: Key Commodities Traded between NER and Neighbouring Countries	
Partner country	**Key commodities**
Bangladesh	Coal, limestone, boulders, vegetable seeds and agro-horticultural products (ginger, apple and citrus fruits, betel nut, betel)
Myanmar	Cumin seeds, cotton yarn, auto parts, soybean meal, wheat flour, and pharmaceuticals, dry chilli, dry grapes, wheat flour
Bhutan	Rice, Maize
Source: Observer Research Foundation (2021), Export-Import Bank of India	

The NER produces a huge marketable surplus in several perishable commodities, such as ginger, grapes, orange, pineapple, litchi, etc. But, agri-exports from NER are less than one per cent of the region's output due to a lack of long-term storage infrastructure (IBEF, 2017; Export-Import Bank of India; Kathuria, S.& Mathur, P., 2020).

The eight states of NER are endowed with scenic natural beauty and rich cultural diversity, thus having the potential to become an international tourism marketplace. There is a huge potential for developing eco-tourism and cultural tourism. The NER is home to many wildlife sanctuaries like Kaziranga National Park. It boasts of the famous Kamakhya temple in Assam and the largest monastery in the country in Tawang.

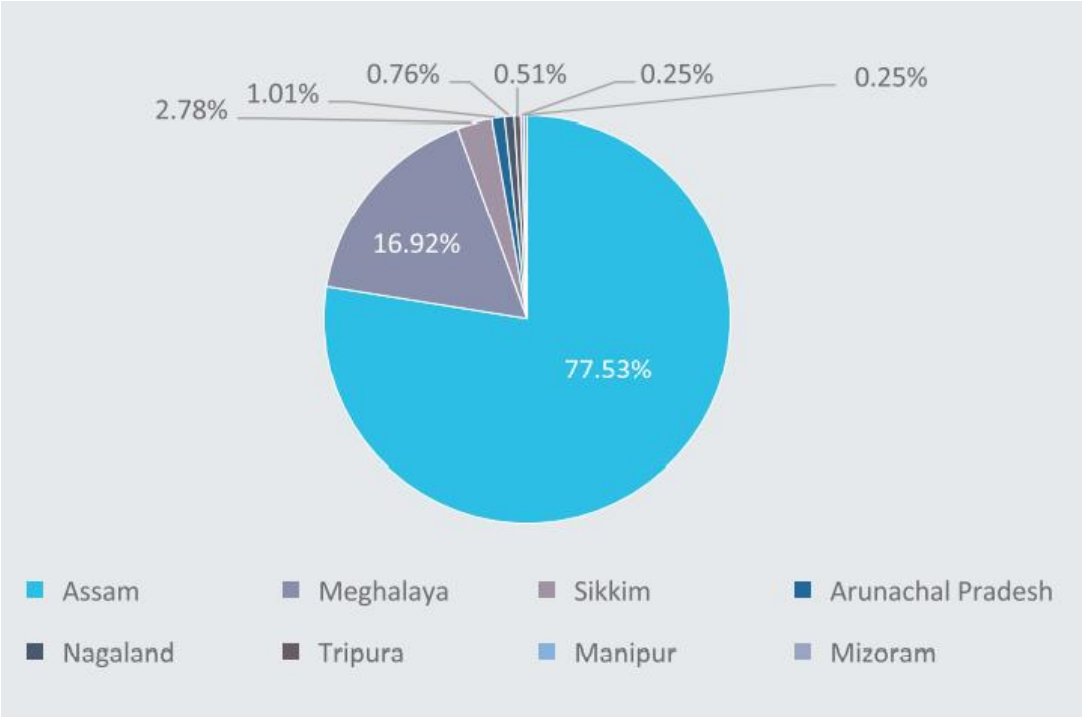
Nagaland's Hornbill Festival showcases tribal cultures, dances, and music and creates an extravaganza of festivities. Mawsynram, near Cherrapunji in Meghalaya, is credited as being the wettest place on Earth. Through the NER flows the Brahmaputra, one of the major rivers of Asia. It is mentioned that the Brahmaputra starts from China and flows through India (Northeast) and Bangladesh.

The NER is also endowed with hydro-potential, oil and gas, coal, limestone and other mineral resources. It is also rich in forest resources which occupy nearly half of the total area in the region. Forest resources include rubber, hardwood, medical plants and herbs, and cane and bamboo timber. Moreover, NER is the only region where four commercial silk types are produced (Mulberry, Muga, Eri, and Oak Tasar).

Assam is by far the largest industrialised state in the region, comprising nearly 88 per cent of the total industrial units. The industries in Assam are mainly mining and quarrying, wool spinning, wooden products, footwear, fertilisers and chemicals, insulated wires and cables, spinning and weaving, pulp and paper, food processing, wine and malt, bidi, cigars and cigarettes, printing, bleaching and dyeing, and drugs and medicines.

Most of the products produced in NER have significant domestic and international demand, especially in neighbouring countries. The major commodities primarily traded from the NER to the Rest of India (ROI), and foreign countries are limestone, cement clinkers, fertilisers, Horticulture products, PoL & Crude, Ballast, Silicon, Tea, Containers, Military items, and Seasonal agricultural commodities.

Figure 3: State-wise Export Share (April 2017-July 2018)



Source: Export-Import Bank of India

Major commodities traded from ROI to NER are Iron and steel, Fertilizers & fertiliser raw material, Horticulture, Petroleum, Oil and lubricants, Crude oil, Edible oil, Pharmaceuticals, Automobiles, Tar coal/Bitumen, Fly ash, Ballast, Autoparts, Imported coal, Containers, Forest products, Chemical products, Military items, Stone (Ernst & Young, 2017). Major commodities exported from NER are tea, coal, Coke and briquettes, bulk mineral, petroleum, drug formulation, cement, cosmetics, cereal preparation, iron & steel, human hair products, agrochemicals, sesame seeds, spices, and vegetables. Assam and Meghalaya constituted more than 94 per cent of exports from the region in 2017-2018 (Export-Import Bank of India).

Improved logistics are expected to help these states market agri-horticulture crops, enabling them to play an important role in regional value chains.

Challenges from an Underdeveloped Logistics Ecosystem and Its Impact on NER

Transport connectivity and logistics infrastructure in the NER has remained neglected for a long. This has prevented these states from participating and benefiting from India's economic reform programmes launched in the early 1990s. Some of the major challenges include the following:

- For the NER States, limited access points to ROI, primarily because of its long distances and narrowed connectivity through West Bengal, coupled with inadequate logistics development centred primarily on Assam, make cargo movement to/from the region time-consuming and costlier. The states' difficult terrain makes the operation and management of logistics challenging. As a result, the focus of development initiatives has been more on Assam than on other states in NER.
- Owing to inadequate connectivity and logistics infrastructure, NER's agricultural produce often fails to find timely markets leading to distressed selling and/or wastage. For instance, it takes about 10–15 days to transport spices from Guwahati to Delhi and more than 25 days from Guwahati to Mumbai.
- Additionally, connectivity within NER also presents a significant challenge for collecting and aggregating produce from the many small farms. This restricts farmers from producing high-value agricultural products and from a wider market in ROI.
- The modal share in NER is skewed towards roadways, followed by railways, despite having a good network of inland waterways and now access to Chittagong and Mongla ports.
- Even in the case of roads, it is found that only 28.5 per cent of the roads are paved (the national average is 63.4 per cent) and only 53 per cent of the national highways have more than two lanes (the national average is 77.9 per cent).
- Moreover, high precipitation in some areas results in frequent landslides and roadblocks. Additionally, Siliguri Corridor is very congested. Furthermore, many bridges connect different stretches due to the various NER waterways, but most are dilapidated and need repair (JICA, 2018).
- Railway connectivity is nominal in hilly states (such as Meghalaya and Arunachal Pradesh) compared to the plain regions such as Tripura. As the terrain in NER is hilly and ecologically vulnerable, land transport development and expansion (road and rail) are difficult and expensive.
- In the case of railways, overutilisation of the Siliguri corridor (the only land connectivity) increases the logistics cost. Another issue with the railway network in NER is that they still work on diesel traction. The haulage charges to ICD, Amingaon is also considerably high and limited rail container services are provided by CONCOR (Ernst & Young, 2021).
- Although there are several Land Customs Stations (LCS) in NER, most are not operational, including crucial ones. For example, the only LCS in Mizoram at Kawrpuichhuah with Bangladesh has been closed for several years. There exist complementarities in terms of demand and supply between Bangladesh and Mizoram. Therefore lack of LCS has two

implications: Firstly, people often resort to informal trade channels. Secondly, people resort to trade through longer routes, thereby increasing costs and reducing the competitiveness of those products. Several studies suggest a significant quantum of informal trade between the NER and neighbouring countries, including Myanmar.

- Another issue is that even though there are several operational border crossings between NER and bordering countries, only limited products can be traded through these LCS, which increases transportation costs.
- The region has inadequate logistics facilities like Container Freight Stations (CFS), ICD, Warehouses, and Cold Storage. Only one ICD (Amingaon) in the region results in over-dependence. The cold storage facilities are insufficient to realise the potential of the agri-horticulture sector in NER.
- The unavailability of processing industries in NER results in huge post-harvest loss of agri-horticulture products.
- Mobile/ internet connectivity is limited, and it is difficult to track and trace transit cargo or simplify/digitalise trade processes. This also inhibits investments in NER.
- Lack of reasonableness of road freight rates and high prices for terminal services in NER, such as container handling charges in Amingaon ICD. This issue is also pronounced in states like Mizoram.
- The inland waterways route faces various challenges, such as navigability issues (where the draft is not even 1.5m in a few stretches), minimal infrastructures at the terminal, unavailability of night navigation facilities, one-way cargo, multiple customs checks (transit cargo from ROI to NER are checked for six times). For instance, the draft is very low in Sonamura-Daudkandi (IBP 9, 10) route. Therefore, the pilot run was conducted only with 50 tonnes of cement.

Conclusion and Way Forward

The absence of efficient logistics is a significant challenge for all states in the NER. Improving logistics will enable this region to realise its trade potential within and with neighbouring countries and attract more regional investment.

The following interventions could be considered to improve the logistic ecosystem and help NER states to achieve their economic potential:

- ✓ Considering the region's difficult terrain, state governments may look at developing appropriate action plans or policies to create the required infrastructure in coordination with Central agencies.

Figure 4: Existing and proposed routes between North India and Northeast India through inland waterways

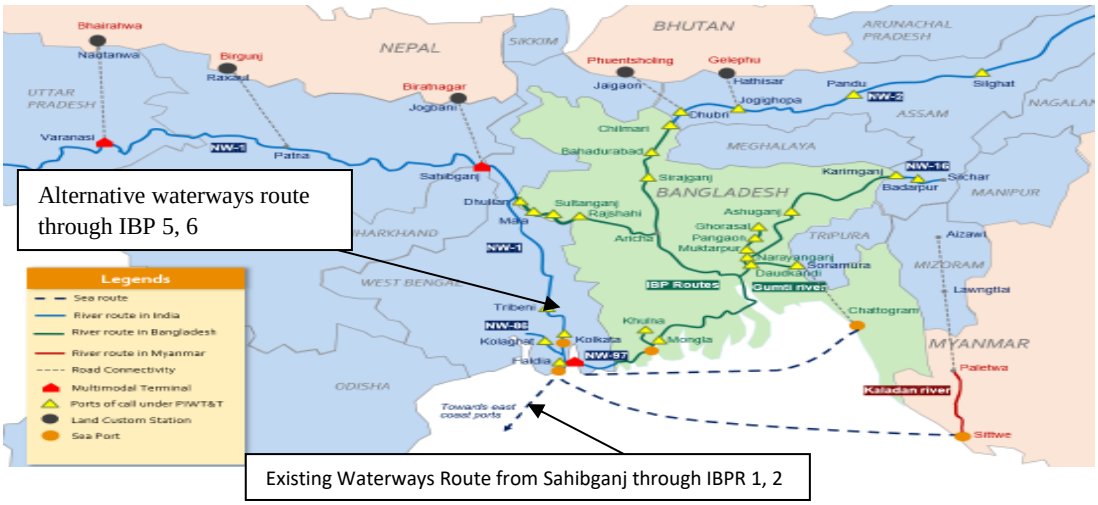
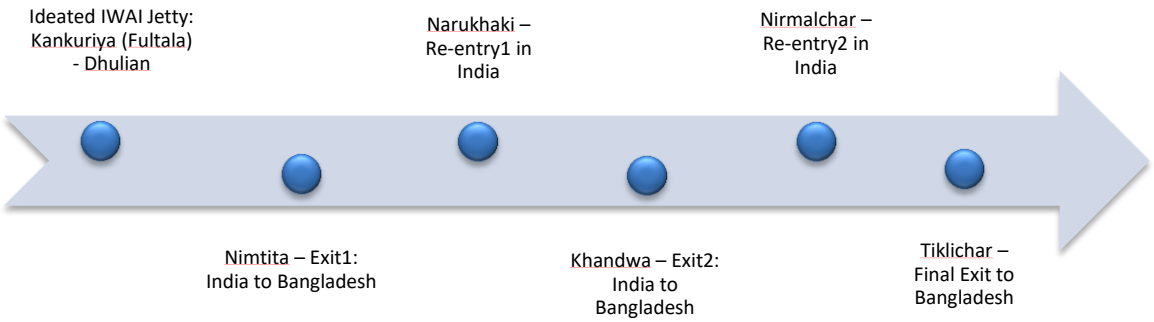


Figure 5: Multiple border points between Dhulian and Tiklichar as the river meanders between India and Bangladesh between this stretch



Source: Prepared by author

- ✓ All the states in NER may establish a State Logistics Cell and State Logistics Coordination Committee for the integrated development of the logistics ecosystem. This should be in tune with the PM Gati Shakti Master Plan and NLP.

- ✓ The National Logistics Policy, 2022, encourages state governments to pursue the development of state and city logistics plans or policies. Such plans or policies may provide a roadmap for the development of intermodal infrastructure, improvement in logistics services, processes and regulatory regime, digital systems and capacity, and institutionalising a system of monitoring user perspective. They would improve the efficiency of city logistics while reducing congestion/pollution and creating opportunities for accelerated economic growth.

- ✓ Presently, a cargo moving through inland waterways from Sahibganj (North India) to NER has to take the Sahibganj-Kolkata-Hemnagar-Dhubri route, using IBPR 1,2 traversing a total river distance of 1535 km and involving 16 days of operation. With operationalisation of IBPR 5,6 (Dhulian-Rajshahi) the same consignment could find a shorter way to reach the same

destination, saving 935 km and approximately 9 days. The existing and the proposed alternative routes are depicted in Figure 4. However, it requires operationalising the Jangipur lock and addressing the LAD issues in this route, especially between Narukhaki and Tiklichar. Further, it is suggested that the usage of the Electronic Cargo Tracking System (ECTS) may be adopted on the waterway route from Dhulian (West Bengal, India) to Charghat (Rajshahi division, Bangladesh). In this stretch, the river meanders between India and Bangladesh repeatedly and repeated customs checks at all points make the route movement time-consuming. Figure 5 shows the multiple customs checks required between Dhulian and Tiklichar as the river meanders in this stretch.

- ✓ There is an urgent need to improve the internet connectivity in NER to automate the customs procedures, track cargoes (using RFID technology/ Barcode technology, ECTS), and simplify the trade process. Automating customs procedures will reduce transit time and logistic costs, and tracking the cargoes will reduce unnecessary stoppages and increase the security of cargo, and reliability. This, in turn, will increase investment in NER.

- ✓ Establishing food processing units and logistic infrastructure such as cold storage, CFS, and warehouse needs urgent attention.

- ✓ It is expected that by implementing the Bangladesh-India-Nepal (BIN) Motor Vehicles Agreement, NER will be able to use the Kolkata-Petrapole-Benapole-Dhaka-Agartala road route. This will reduce the total cost and distance to one-third compared to the Kolkata-Siliguri-Agartala route. There is a need to expedite the agreement's implementation for NER's intra-country and inter-country connectivity.

Bibliography

ASCELA. (n.d.). *Realising the potential of Logistics Sector in Northeast Region of India.* Retrieved November 3, 2022, from Ascela Advisors: https://ascelaadvisors.com/Edition-1.pdf

Assam Logistics and Warehousing Policy, 2022. (n.d.). Retrieved November 2, 2022, from GOVERNMENT OF ASSAM- Industries and Commerce: https://industriescom.assam.gov.in/sites/default/files/swf_utility_folder/departments/industries_com_oid_4/portlet/level_2/assam_logistics_and_warehousing_policy_2022.pdf

Banerjee, P. (2022, September 17). Helping Businesses to move. *The Hindu Businessline*.

CII. (n.d.). *Northeast Logistics Conclave 2022*. Retrieved 10 25, 2022, from CII: https://www.cii.in/EventsDetails.aspx?enc=eo18/j+aJMWXCXiMZZAdo+AunvsO55FFi2XaudBOXOiPPdDzCOYnXJ35dOA1ul3SBZCla4xgrDvG5M3fkDk7qOrylgFFBv7Xjvrdj9JpoIXfe3udiuPxdSrhsYHQWmGZKtKbYNwMUrwryg4/H6rypKYO0u1yMPpRZ1kA9GQrQc/zeOlEppKCFvzVM/K68kflWz/FKXidC8lhWgygkfRET

NEFR. (2022, June 17). *Boost to railway infrastructure in Northeast during last eight years Modern amenities are being provided*. Retrieved November 11, 2022, from Northeast Frontier Railway: *https://nfr.indianrailways.gov.in/view_detail.jsp?lang=0&dcd=1896&id=0,4,268*

Tulsiani, P. (2018, August 14). Uncorking The Logistic Competencies Of India's Northeast. *Businessworld*.

Directorate General of Commercial Intelligence and Statistics (DGCIS) (2021). Interstate movement of goods. *http://www.dgciskol.gov.in/pub_inland.aspx*

Ernst & Young LLP (2017). *Study for modal shift of cargo passing through Siliguri Corridor destined for Northeast and neighboring countries to IWT.*

Ernst & Young LLP (2021). *Logistic Ease Across Different States.* Department of Commerce, Ministry of Commerce, Government of India. *https://commerce.gov.in/wp-content/uploads/2021/11/LEADS-2021-Report_Final.pdf.*

Export Import Bank of India (2021). *MSMEs in Northeast India*. *https://www.eximbankindia.in/Assets/Dynamic/PDF/Publication-Resources/SpecialPublications/MSMEs-in-North-East-India03-03-21.pdf*

Export Import Bank of India (n.d.).*Unlocking Export Potential in the Northeast: The MSME Way.* *https://agroloomcraft.in/administrator/uploads/knowledge_data/53_Export_Potential_2_Print_June_18.pdf*

Government of India (2009). Outcome Budget. Ministry of Road Transport and Highways. *https://morth.nic.in/sites/default/files/Outcome_Budget_2009_10.pdf#:~:text=The%20Ministry%20has%20taken%20up%20the%20Special%20Accelerated,the%20North%20Eastern%20Region%20to%20the%20National%20Highways.*

Herrera Dappe, Matias; Kunaka, Charles (2021). Connecting to Thrive: Challenges and Opportunities of Transport Integration in Eastern South Asia. International Development in Focus. Washington, DC: World Bank. *World Bank. https://openknowledge.worldbank.org/handle/10986/34916 License: CC BY 3.0 IGO.*

India Brand Equity Foundation (IBEF) (September 7, 2017). Huge potential for agriculture export from Northeast: Study. *https://www.ibef.org/news/huge-potential-for-agriculture-export-from-northeast-study*

Japan International Cooperation Agency (JICA) (2018). *Preparatory Study for Northeast Road Network Connectivity Improvement Project (Phase 2).* *https://www.jica.go.jp/english/our_work/social_environmental/id/asia/south/india/c8h0vm0000as3y0t-att/c8h0vm0000czwmci.pdf*

Kathuria, Sanjay; Mathur, Priya (2020). Strengthening Cross-Border Value Chains : Opportunities for India and Bangladesh. Development Knowledge and Learning. Washington, DC: World Bank. *World Bank*. *https://openknowledge.worldbank.org/handle/10986/32719 License: CC BY 3.0 IGO.*

Observer Research Foundation (2021). *Enhancing Trade and Development in India's Northeast.* *https://www.orfonline.org/research/enhancing-trade-and-development-in-indias-northeast/*

Sharma, A. (February 10, 2021). India's Act East policy takes wings with water connectivity with neighbours as focus. *Indianarrative. https://www.indianarrative.com/india-news/indias-act-east-policy-takes-wings-with-water-connectivity-with-neighbours-as-focus-15305.html*

Endnotes

[1] A motor vehicles agreement, popularly known as Bangladesh-Bhutan-India-Nepal (BBIN) Motor Vehicles Agreement (MVA), was signed in 2015, but the agreement is yet to be implemented. If implemented, this agreement will facilitate the seamless movement of vehicles from one country into the territories of other countries.

[2] The aim was to improve the connectivity of the Northeastern Region with the rest of India through a 670km long four-lane divided highway between Srirampur and Silchar.

[3] LEADS 2022 is based on a grading system distinct from the ranking system adopted in earlier LEADS reports. The LEADS 2022 Survey grades states into Achievers – states that have shown exemplary logistics ecosystems with exceptional infrastructure and transparent regulatory processes; Fast Movers – states who are moving towards becoming Achievers by notifying progressive policy and legislative initiatives along with new infrastructure projects; and Aspirers – states which have initiated their journey towards logistics ease and excellence by adopting national best practices to improve further their contribution towards India's emerging position as a global manufacturing and logistics hub.

With the support of
UKaid Foreign, Commonwealth & Development Office
ADB Asian Development Bank

CUTS International
D-217, Bhaskar Marg, Bani Park, Jaipur 302 016, India
Ph: +91.141.228 2821, Fax: +91.141.228 2485, E-mail: cuts@cuts.org, Web: www.cuts-international.org
Also at Delhi, Kolkata and Chittorgarh (India); Lusaka (Zambia); Nairobi (Kenya); Accra (Ghana); Hanoi (Vietnam); Geneva (Switzerland); and Washington DC (USA).