



Strengthening Inter-state Connectivity in India's Bordering States for Trade and Inclusive Development

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India's bordering states comprise states which share international land borders with countries in Eastern South and Southeast Asia, namely Nepal, Bangladesh, Bhutan and Myanmar. These include states of Uttar Pradesh, Bihar, West Bengal and seven sister states in the Northeast Region (NER) of India – Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, and Tripura. From the regional cross-border trade perspective, these are strategic states as these directly impact cross-border trade and cooperation with neighbouring counties. It is observed that despite their strategic importance, the economic progress of these states has remained sub-optimal both in terms of basic infrastructure and logistical performance, and their logistics remain in a poor state.

This may change now given two major initiatives by the Government of India to improve the logistics ecosystem in India -- the National Logistics Policy launched in September 2022, and PM Gati Shakti Master Plan launched in October 2021. These initiatives are expected to lower the logistics cost in India from 14 per cent of the GDP to less than 10 per cent in the coming years.

This Briefing Paper attempts to understand transport connectivity and logistics preparedness of India's bordering states to fully contribute towards making India a global manufacturing and logistics hub. It also suggests measures to improve the logistics and trade ecosystem.

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India's Bordering States and their Importance

For this paper,² India's bordering states comprise states that share international land borders with countries in Southeast Asia, namely Bangladesh, Bhutan, Myanmar and Nepal. These include states of Uttar Pradesh, Bihar, West Bengal and seven sister states in the Northeast Region of India – Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, and Tripura.

From the regional cross-border trade perspective, these states are most strategic, as they house more than 90 (out of 106) Land Customs Stations (LCS), 7 (out of 9) operational Integrated Check Posts (ICPs), and 13 (out of 14) proposed ICPs to be established by the Land Ports Authority of India (LPAI) in the second phase.³

These border crossings will not only facilitate trade and movement of people, but also enhance other multimodal intra-and inter-regional connectivity initiatives. They will play a crucial role in boosting regional connectivity, providing employment opportunities and integrating the Indian economy.

These states directly influence land-based trade and shape India's trade relationship with neighbouring countries. State-wise details on LCS, operational and under-development ICPs are provided in Table 1.

Table 1: LCS, ICPs (operational and planned) in the Select States

Name	LCS (No.)	Operational ICP	Proposed ICP
Northeast states			
Arunachal Pradesh	1	-	-
Assam	12	2	-
Manipur	-	1	-
Meghalaya	10	-	1
Mizoram	4	-	1
Nagaland	2	-	-
Tripura	8	1	1
Other states			
Bihar	12	2	1
Uttar Pradesh	10	-	2
West Bengal	31	1	7

Source: Extracted from LPAI's Land Customs Station Evaluation Report, March 2021.

² This is a macro briefing paper based on four other briefing papers produced under the [M-Connect Project](#), namely (1) [Role of West Bengal in Shaping India's Logistics Performance](#) (2) [Role of Uttar Pradesh in Shaping India's Logistics Performance](#); (3) [Role of Northeast Indian States in Shaping India's Logistics Performance](#); and (4) [Understanding Logistics Ecosystem in Bihar and Its Scope for Improvement](#). The purpose of this paper is limited to present a macro perspective of issues and challenges faced by these states.

³ Land Ports Authority of India, Land Customs Station Evaluation Report, March 2021

In view of the above, and taking into account two recent initiatives by the Government of India to improve the logistics ecosystem in India – the National Logistics Policy⁴ launched in September 2022, and PM Gati Shakti Master Plan⁵ launched in October 2021 – this Briefing Paper attempts to understand quality and efficiency of existing transport infrastructure, challenges therein and logistics preparedness of states in India’s East to fully contribute towards making India a global manufacturing and logistics hub. It also seeks to identify infrastructural gaps and to suggest policy and investment measures for improving the logistics and trade ecosystem.

Transport Connectivity among Bordering States

Transport connectivity plays an essential role in the development and economic growth of bordering states. Enhanced transport connectivity is often characterised as a harbinger of opportunities in the field of business, education, tourism, and investment. Hence, the bordering states need to be connected with multimodal transportation networks for enhanced developmental and economic opportunities.

Road connectivity is one of the most prominent transport connections between the bordering states. Several highways⁶ connect various states of NER, such as NH 2 which connects Assam, Nagaland, Manipur and Mizoram, and National Highway (NH) 10 connects the India/Bangladesh border to Siliguri in West Bengal to Sikkim.

Similarly, NH 17 connects Assam to West Bengal and NH 27 connects Assam to the rest of the states of India (Bihar, Gujarat, Madhya Pradesh, Rajasthan, Uttar Pradesh, and West Bengal). The NER is connected with the rest of India by roadways through a 22 km narrow Siliguri Corridor.

While several national highways pass through bordering states, a highway that connects Uttar Pradesh, Bihar, and West Bengal is NH 19. It is a part of the Golden Quadrangle and connects Agra, Kanpur, Prayagraj, and Varanasi in Uttar Pradesh to Bihar, Delhi, Haryana, Jharkhand and West Bengal.

⁴ The goal of the National Logistics Policy is to lower the cost of logistics from its current 14 per cent of GDP to less than 10 per cent to make Indian goods more competitive and also to promote economic growth and job creation.

⁵ The Gati Shakti Master Plan aims at making India a developed nation in the next 25 years. It is essentially a digital platform that brings 16 Union Ministries together, including the Ministry of Road Transport and Highways, for an integrated planning and coordinated implementation of infrastructure connectivity projects for a comprehensive and inclusive socio-economic progress in different parts of the country, especially all the aspirational districts, the Tribal belts, the Hill areas and the North-Eastern Region.

⁶ [Details-of-National-Highways-as-on-31.03](#)

Railways also pose to be of great interest to the bordering states. It provides both time and cost efficiencies in the bordering states. In recent years, the Government of India has placed greater emphasis on the development and railway connectivity in the NER. As per the government plan, the capital cities of all the eight Northeast states are expected to be connected by railways and the country's railway network already connects Tripura, Assam, and Arunachal Pradesh through a broad-gauge line.

Other bordering states, such as Bihar, Uttar Pradesh, and West Bengal are connected with each-other capitals and major towns of India with all types of mail, express and intercity trains. Noteworthy to mention, Uttar Pradesh has direct railway connectivity to two states in NER, namely Assam and Tripura through the state of Bihar and West Bengal. Moreover, a significant part of two freight corridors Eastern Dedicated Freight Corridor (EDFC) and Western Dedicated Freight Corridor (WDFC) passes through some of these states.

As for the waterways, the NER uses Kolkata/Haldia port through Bangladesh to connect to the rest of India. There are two National Waterways (NW) in NER- NW 2 (Dhubri-Sadiya) and NW 16 (Lakhipur-Bangra) that connect NER to Bangladesh. These national waterways further connect NER to the Rest of India (ROI) through the India-Bangladesh Inland Waterways Protocol Route.

The rest of the bordering states are better placed with regard to waterways resources. The NW 1, also known as the Ganga-Bhagirathi-Hooghly river system is the longest waterway in India. It runs from Prayaganj in Uttar Pradesh to Haldia in West Bengal via Patna and Bhagalpur in Bihar across the Ganga River.

West Bengal is home to two major river ports: Kolkata and Haldia. These cater to trade requirements of not only India but also to third-country trade. This state is the starting point for three of the five India-Bangladesh protocol routes. Similarly, numerous waterways are passing through the state of Bihar. Seven of the 111 waterways designated as (NWs under the National Waterways Act of 2016 have been planned for the state of Bihar. These include NW1, NW37, NW40, NW54, NW58, and NW81.

The access and availability to different modes of transportation, including rail, road, inland waterways, and sea are crucial for the bordering states. An efficient logistic ecosystem in states not only impacts the internal movement of people and commodities but also plays a crucial role in facilitating the interstate movement of people and goods between India and its neighbours.

However, despite the access and availability to different modes of transportation, including rail, road, air, inland waterways, and sea, the economic progress of these states has remained sub-optimal compared to many other states both in terms of basic infrastructure for economic activities, trade and development indicators. This is reinforced by the sub-optimal logistics performance of these states in the Logistics Ease Across Different States (LEADS) report published by the Ministry of Commerce and Industry, Government of India.

Status of Logistics and Economic Development

The LEADS Report 2022⁷ puts seven of these states, namely Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Bihar and West Bengal in the list of *Aspirers*, implying that these states have initiated their journey towards logistics ease and excellence, however, they have a long way to go to contribute towards making India a global manufacturing and logistics hub.

Tripura has performed relatively better as the state is included in the category of *Fast Movers* – states who are moving towards becoming *Achievers* by notifying progressive policy and legislative initiatives along with new infrastructure projects. The other two states, Assam and Uttar Pradesh are included in top performing states and categorised as *Achievers* – states that have shown exemplary logistics ecosystems with exceptional infrastructure and transparent regulatory processes – in logistical efficiency.

In the case of per capita income, many of these states have lower per capita income in comparison to the national average. For instance, as per Reserve Bank of India data while the national per capita average income is Rs. 93.97 thousand (at 2011-12 price), eight of the selected 10 states have lower per capita income. Among these, the lowest per capita income is of Bihar at about 30 per cent of the average, only preceded by Uttar Pradesh at 42 per cent.

Arunachal Pradesh is the only state whose per capita income exceeds that of the national average. One possible explanation for this is that this state has experienced remarkable growth over the past decades, and it has diversified from an agriculture and forestry subsistence economy into a monetised economy.⁸ The current status of states in terms of logistics and some selected indicators is provided in Table 2.

⁷ LEADS 2022: [Logistics Ease Across Different States](#), Ministry of Commerce and Industry, Government of India

⁸ Amitava Mitra June (2020), Challenges of Development in the Border Areas: An Empirical Study, https://rgu.ac.in/wp-content/uploads/2021/04/6_Working-Paper-6_Final-1-min.pdf

Table 2: Economic, Infrastructure and Logistics Indicators of Selected States

State	LEADS 2022** (rank/ category)	Infrastructure and Economic Indicators					
		National Highways (Km)	State Highways (km)	Total Road Length (km)	Railways Route (total track km)	SGDP 2020-21 (2011-12 price, value in Rs. crore)	Per-capita Income 2020-21 (2011-12 price, value in Rs. thousand.)
Northeast States							
Arunachal Pradesh	Aspirer	2,537.4	8123*	37025	26	18867.24	108.71
Assam	Achiever	3,908.5	2530	337777	3,662	228463.35	57.23
Manipur	Aspirer	1,750.3	715	27612	18	20767.48	51.88
Meghalaya	Aspirer	1,155.6	772	22939	13	23750.66	56.68
Mizoram	Aspirer	1,422.5	170	11012	6	14417.39	97.41
Nagaland	Aspirer	1,547.7	722	36239	23	17991.61	69.66
Tripura	Fast mover	853.8	329	42925	337	37244.23	80.51
Other Border States							
Bihar	Aspirer	5,357.6	4006	209549	7,663	385728.20	28.13
Uttar Pradesh	Achiever	11,736.8	7201	428055	16,001	1077391.86	39.37
West Bengal	Aspirer	3,664.5	3262	322067	10,309	792720.09	72.20

* This is the length of PWD Roads (Arunachal Pradesh has not classified roads into State Highways and District Roads). ** Logistics Ease Across Different States 2022 ranking/categorization.

Source: For SGDP and Per Capita Income – Reserve Bank of India; For National Highways – National Highway Authority of India (November 2018 data), for State Highways and Total Length of Roads – Reserve Bank of India (<https://www.rbi.org.in/Scripts/PublicationsView.aspx?id=20115>); For Railways – Indian Railways (<https://ircep.gov.in/AboutUs.html>); LEADS 2022).

Logistics Efficiency and Challenges

Infrastructural and logistics-related challenges faced by these states have been discussed in detail in four briefing papers.⁹ As indicated above, the performance of these states about 15 different indicators can also be observed from the LEADS 2022 report released by the Ministry of Commerce and Industry.

It is mentioned that the LEADS 2022 report is based on a combination of perception and objective data-based indicators. While perception questions have been administered to private players; objective data queries to the State/ UT Governments.

⁹ Supra Note 2

The findings in the report are considered to be a validated and accepted mechanism for measuring the efficiency of the logistics ecosystem of the State/UT.

LEADS 2022 report reveals that Uttar Pradesh is the only state in India's East which has been graded 'Achiever' across all three pillars and 15 indicators, implying the state has shown exemplary logistics ecosystems with exceptional infrastructure and transparent regulatory processes.

Performances of other states are sub-optimal, as they are graded as either 'Aspirer', or 'Fast Mover' in most of the indicators (Table 3).

Sub-optimal performance of states in India's East implies that these states need to make focused and coordinated interventions to improve their connectivity and logistics ecosystems. For instance, Bihar, even though it has initiated its journey towards logistics ease and excellence, needs to take initiatives to address issues related to road infrastructure, ease of obtaining approvals, ease of entry, and also grievance redressal.

In West Bengal, concerted efforts are required to improve the road infrastructure, and warehouse infrastructure, among others. In NER, excluding Assam, the situation appears to be worse. Arunachal Pradesh, Manipur and Mizoram are performing sub-optimally in all the 15 indicators, as these states are graded as 'Fast Mover' or 'Aspirer'. Assam is the only state in NER graded as 'Achiever' in 13 indicators, and 'Aspirer' in two indicators – Timeliness - terminal services, and issues related to grievance redressal.



Table 3: Quality of Logistics Infrastructure in India's East (indicator-wise grading and heat maps)

Logistics Indicators	States in India's East									
	Arunachal Pradesh	Assam	Manipur	Meghalaya	Mizoram	Nagaland	Tripura	Bihar	Uttar Pradesh	West Bengal
Road infrastructure	Green	Yellow	Orange	Green	Orange	Green	Green	Orange	Yellow	Green
Rail infrastructure	Green	Yellow	Orange	Orange	Orange	Green	Green	Yellow	Yellow	Yellow
Terminal infrastructure	Orange	Yellow	Orange	Orange	Orange	Green	Orange	Green	Yellow	Yellow
Warehousing infrastructure	Green	Yellow	Orange	Green	Orange	Green	Green	Green	Yellow	Green
Modal logistics services	Green	Yellow	Orange	Green	Orange	Yellow	Green	Green	Yellow	Green
Quality of services at terminals	Orange	Yellow	Orange	Yellow	Green	Yellow	Yellow	Green	Yellow	Yellow
Reasonableness of prices of logistics services	Orange	Yellow	Orange	Orange	Green	Yellow	Orange	Yellow	Yellow	Yellow
Timeliness - transportation services	Orange	Yellow	Green	Green	Orange	Yellow	Green	Green	Yellow	Green
Timeliness - terminal services	Orange	Green	Orange	Green	Orange	Yellow	Green	Green	Yellow	Yellow
Track and trace cargo movement	Green	Yellow	Green	Yellow	Orange	Yellow	Yellow	Green	Yellow	Yellow
Safety/security of cargo	Green	Yellow	Orange	Yellow	Green	Yellow	Green	Green	Yellow	Green
Promoting, incentivising, facilitating	Green	Yellow	Green	Green	Orange	Yellow	Green	Orange	Yellow	Green
Ease of obtaining all approvals	Green	Yellow	Green	Green	Orange	Yellow	Yellow	Orange	Yellow	Orange
Ease of entry	Green	Yellow	Green	Green	Orange	Yellow	Green	Orange	Yellow	Orange
Issues related to grievance redressal	Green	Green	Orange	Green	Orange	Yellow	Yellow	Orange	Yellow	Green

Legends (shades)

Achiever	Fast Mover	Aspirer
90-100%	80-90%	<80%

Source: Ministry of Commerce and Industry (Extracted from LEADS 2022)

It is worth reiterating that states in India's East comprising Uttar Pradesh, Bihar, West Bengal and the seven sister states in the NER of India are strategic in view of their proximity to international borders. Within these states, Uttar Pradesh, Bihar and West Bengal have importance not only because these share international borders with neighbouring countries, but more importantly because these connect NER of India

through multiple modes of transportation, particularly roadways, railways and waterways. These states serve as enablers to the movement of people and freight from one part of India, say North, South and West regions, to another, say NER.

Strengthening transport connectivity and logistics between and among these states/regions is, therefore, crucial not only for their holistic development but also for boosting India's land- and water-based trade with neighbouring countries in South and Southeast Asia.

Conclusion and the Way Forward

Two elements are critical for enabling improved connectivity between and among these states/regions. Firstly, there is a need for identifying all transport corridors, including roads and waterways that facilitate the movement of people and freights through the states of Uttar Pradesh, Bihar and West Bengal and beyond to the NER; and secondly adopting a 'Whole-of-Government Approach (WGA)' to facilitate inter-state cooperation and project implementation. The WGA underlines the importance of the joint activities performed by ministries, public administrations and public agencies to provide a common solution to connectivity and related issues.

Following interventions may be considered on a priority basis.

- States in India's East should come out with their logistics policies tuned to the Gati Shakti Master Plan and National Logistics Policy launched by the Government of India in 2021 and 2022 respectively.
- National Highways, such as NH 27 and NH 19, that connect states in India's East to each other need to be strengthened and converted into an economic corridor. These highways are already one of the most important corridors connecting Northeast India with the rest of India. There is a need to streamline the development and maintenance of the corridor to accommodate increased traffic of both passengers as well as cargo vehicles.
- There is a need to ensure the navigability of the NW-1 and NW-2. NW-1 passes through the states of Uttar Pradesh, Bihar and West Bengal. Through the India-Bangladesh Protocol Route, NW-1 is linked to NW-2 in Assam. A few trial runs and shipments have already taken place connecting NW-1 and NW-2.

- The EDFC passes through Punjab, Haryana, Uttar Pradesh, Bihar, Jharkhand, and West Bengal and terminates at Dankuni in West Bengal, from where the Bangladesh border is at a distance of around 100 km. It needs to be ensured that the project is completed on time. Additionally, the project taken by the Ministry of Railways to connect the capital of North-eastern states needs to be completed in time to ensure cargo movement from the Northeast region to other parts of the country.
- Finally, master plans, such as Gati Shakti and National Logistics Policy should be the guiding force behind the planning and implementation of infrastructure projects. These master plans should ensure coordination between ministries to enhance the cost-effectiveness and timely completion of work undertaken.

