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The Logistics Navigator 2025



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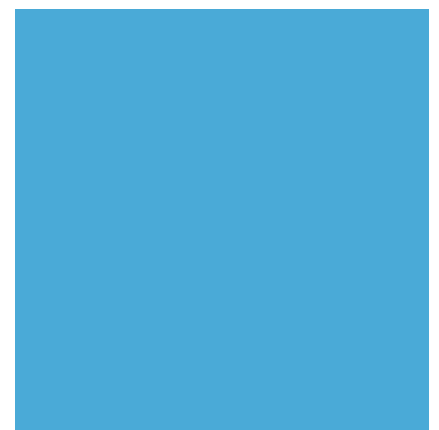


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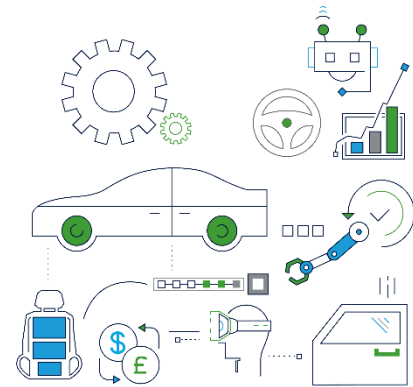
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Chapter 1: Introduction

India's logistics sector is experiencing a major transformation, driven by rapid economic expansion, policy advancements, and technological progress. The National Logistics Policy (NLP) is playing a crucial role in enhancing efficiency and streamlining operations, leading to a shift towards multimodal transportation, improved infrastructure, and increased digitalization. The booming e-commerce industry has further intensified the need for seamless last-mile delivery solutions, encouraging businesses to adopt cutting-edge technologies such as AI-powered supply chains, automation, and sustainable logistics practices.

The growing presence of third-party (3PL) and fourth-party logistics (4PL) providers is improving supply chain efficiency, enabling businesses to focus on core functions while outsourcing logistics operations. Additionally, initiatives such as dedicated freight corridors, port modernization, and smart warehousing are strengthening the logistics sector. Sustainability is also emerging as a key priority, with the adoption of electric vehicles, carbon-neutral supply chains, and alternative fuels gaining traction.



Despite challenges like fluctuating fuel prices, urban congestion, and regulatory complexities, government initiatives such as PM Gati Shakti and Bharatmala are working to enhance freight movement. Moreover, India's efforts to boost manufacturing and exports through the 'Make in India' initiative highlight the importance of a strong logistics network in global trade competitiveness. As India moves toward becoming the world's fourth-largest economy by 2026, a well-integrated and future-ready logistics ecosystem will be essential for sustained economic growth.

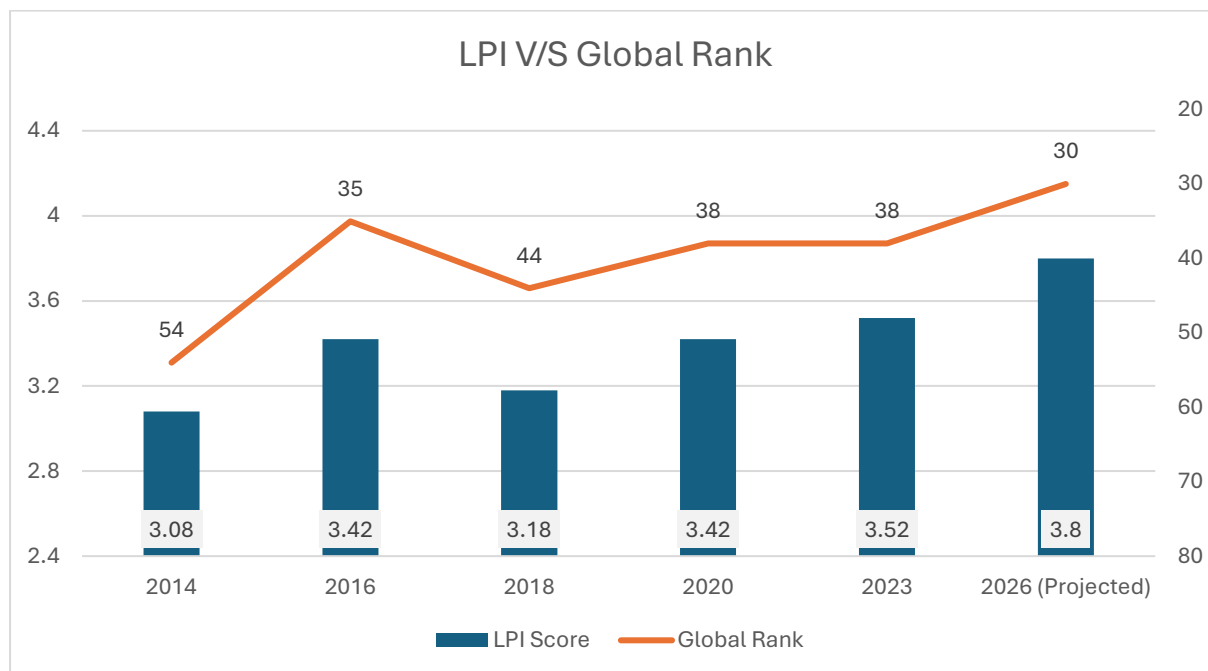
India's logistics ecosystem is focusing on enhancing multimodal connectivity to boost cost efficiency. Dedicated Freight Corridors (DFCs) aim to double rail freight capacity to 45% by 2030. Infrastructure improvements, like 30,600 km of highways and efficient e-toll systems, reduce delays. Additionally, inland waterways and air freight are experiencing significant growth, contributing to a more integrated logistics network.

As of 2024, over 900 businesses have joined the Unified Logistics Interface Platform (ULIP), enhancing digital integration in India's logistics sector. Operating under the National Logistics Policy (NLP), ULIP enables seamless API-based access to logistics datasets, optimizing cargo movement and supply chain efficiency. With 43+ integrated systems, 129 APIs, and 1,800+ data fields, the platform has facilitated over 35 crore API transactions and supported 90+ applications developed by companies like Super Procure, Cargo Shakti, Shiprocket, and Enmovil. The government continues to promote industry adoption, driving efficiency, transparency, and innovation in logistics.

Sustainability is the primary focus in the ongoing reforms in logistics in India. In this regard, the government has started promoting the use of electric vehicles and green hydrogen-fueled vessels in line with its commitment to net-zero emissions. Adoption of green warehousing practices is gaining momentum with automation and energy-efficient designs aimed at minimizing operational costs. The Maritime Amrit Kaal Vision 2047 also aims to develop

carbon-neutral ports while inducing the usage of alternative fuels such as methanol, aimed at reducing emissions and minimizing the environmental impact of the sector

India's **Logistics Performance Index (LPI)** has seen steady progress over the years, reflecting improvements in infrastructure, digital integration, and supply chain efficiency. The table below highlights India's LPI scores and global rankings from 2014 to the projected 2026 figures, showcasing its evolving logistics capabilities and competitiveness in global trade.



Source: World Bank

1.1 India's Trade Performance (April-October 2023 vs. April-October 2024)

India's trade performance has shown steady growth, reflecting resilience in both merchandise and services sectors. Exports have seen a positive trajectory, driven by strong service sector contributions, while imports have also increased, indicating sustained domestic demand. The overall trade dynamics highlight a balanced expansion, reinforcing the country's position in the global economy. Below is a detailed breakdown of export and import trends over the given period.

Trade Category	April-Oct 2023 (USD Billion)	April-Oct 2024 (USD Billion)	Growth (%)
Merchandise Exports	244.5	252.2	3.10%
Service Exports	192	216.3	12.70%
Total Exports (Merchandise + Services)	436.5	468.5	7.30%
Merchandise Imports	394.2	416.8	5.70%
Service Imports	102.3	114.8	12.20%
Total Imports (Merchandise + Services)	496.5	531.6	7.10%

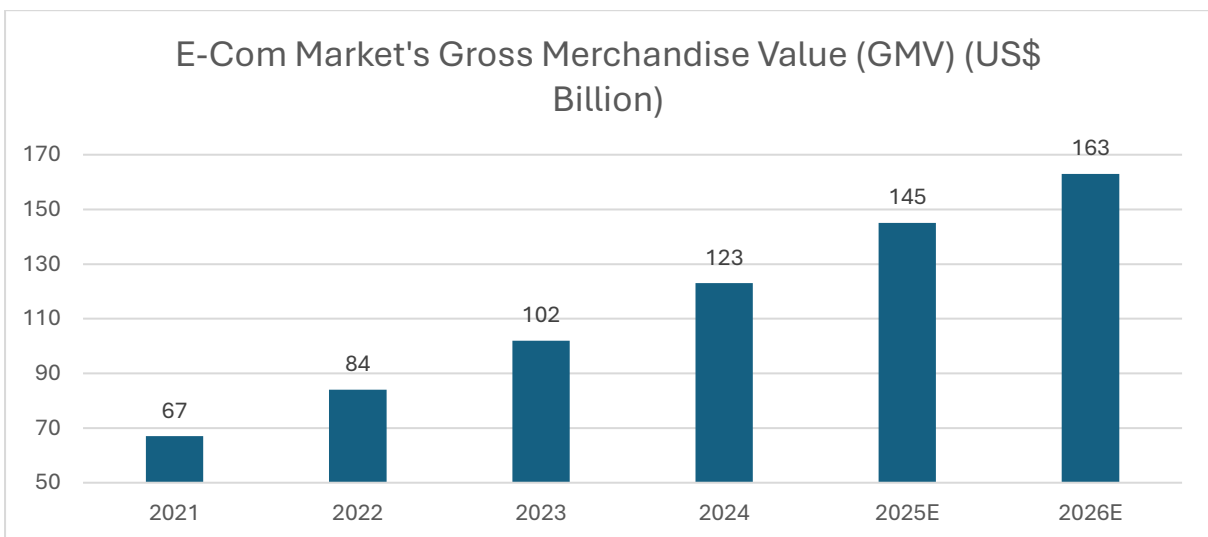
1.2 India's Export Performance Across Key Commodity Sectors (April-October 2023 vs. April-October 2024)

Commodity Sector	April-Oct 2023 (USD Billion)	April-Oct 2024 (USD Billion)	Growth (%)
Smartphones	7.8	10.68	36.85%
Electronic Goods	15.42	19.07	23.69%
Basmati Rice	2.96	3.38	14.28%
Readymade Garments (All Textiles)	7.83	8.73	11.59%
Spices	2.24	2.47	10%
Engineering Goods	61.5	67.48	9.73%
Auto Components/Parts	4.41	4.81	8.98%
Drugs & Pharmaceuticals	15.79	17.05	8%

The last table highlights India's export performance across various commodities, showcasing revenue generated from outbound trade. It includes key sectors like agriculture, engineering goods, electronics, pharmaceuticals, and textiles, reflecting India's growing global trade presence.

1.3 E-commerce Market Growth

The e-commerce market is rapidly expanding with a projected CAGR of 21% in India alone, and this growth is significantly transforming the traditional supply chain dynamics. As e-commerce expands, disruption is taking place across various channels, challenging distributors, and traditional logistics models, particularly in last-mile delivery services. The shift towards omnichannel retailing and the integration of advanced technologies are creating both opportunities and challenges for traditional supply chains.



This publication is the second edition of RSM India's 'The Logistics Navigator (Vol. 1)' highlighting the key findings of our research on logistics infrastructure. Where possible, it also includes insights into upcoming infrastructure projects and facilities, along with their expected completion timelines. Designed as a comprehensive guide to India's logistics landscape, this publication aims to assist professionals across various industries and sectors, including domestic operations and international trade.

1.4 The Navigator has been compiled in the following sections.

The Logistics Navigator is a research-based publication by RSM Astute Consulting Pvt. Ltd. that provides insights into India's evolving logistics landscape. It serves as a comprehensive guide covering key infrastructure developments, trade performance, and logistics trends. The primary purpose of the Navigator is to assist industry professionals by offering data-driven analysis on ports, multimodal transport, freight corridors, and emerging logistics technologies. It also highlights upcoming infrastructure projects, policy changes, and sustainability initiatives shaping the future of logistics in India.

- i. **Ports** – India's ports, both major and non-major, are essential to the nation's trade, with cargo traffic continuously growing due to infrastructure improvements and policy support. Over the last six years, cargo traffic for overseas and domestic (coastal) transportation has evolved significantly, reflecting the increased capacity at both types of ports.
- ii. **Inland Container Depots (ICD) and Container Freight Stations (CFS)** – The establishment and expansion of ICDs and CFSs are central to improving India's logistics infrastructure. A detailed state-wise list of ICDs and CFSs, along with upcoming projects, is available to track their growth and integration with national supply chains.
- iii. **Inland Waterways** – To strengthen domestic transportation, India is focusing on the development of inland waterways, with large rivers like the Ganga, Brahmaputra, and Godavari being harnessed for efficient cargo movement. Existing and upcoming waterways, along with floating terminals and jetties, are being developed to provide additional logistics capacity.
- iv. **Railway Logistics Infrastructure** – Indian Railways is investing in improving railway logistics through modern rail terminals and the development of Dedicated Freight Corridors (DFCs). With high-density routes already supporting substantial traffic, new DFCs will further increase capacity and improve connectivity.
- v. **Multi-Modal Logistics Parks (MMLP)** – Multi-modal logistics parks (MMLPs) are pivotal in integrating various transport modes like rail, road, and port connectivity. A state-wise list of upcoming MMLPs provides insights into how India is enhancing logistics efficiency. These parks help streamline the movement of goods and offer advanced infrastructure for efficient logistics operations.
- vi. **Electric Vehicles (EVs)** – The rise of electric vehicles (EVs) is set to significantly lower road transport costs due to their efficiency and reduced per-kilometers operational costs. While India's EV landscape primarily covers three-wheelers, passenger vehicles, and buses, commercial EVs are being developed to expand the sector further. The

government's push for electric commercial vehicles will help modernize India's road transport industry and contribute to sustainability goals.

- vii. **Cold Storage** – India's cold supply chain faces inefficiencies in storage, distribution, and transportation, contributing to over 15 million metric tons of post-harvest losses annually. While the country has over 8,653 cold storage facilities, underutilization and regional disparities persist, despite significant investments under initiatives like PMKSY and MIDH aimed at improving infrastructure and reducing wastage.

Note: The data / information compiled in this Navigator is retrieved from various public sources & subscribed websites by the RSM India research team. The research team is credited with the Compilation, analytics and enlisting in the user-friendly format. Reference / source links are given at the end of this document. We have limited this Navigator by not mentioning highway infrastructure & commercial IC engines.

Chapter 2: Ports

2.1 Background

India's port sector is rapidly evolving with a strong focus on capacity expansion, efficiency, and multimodal connectivity to boost trade. Key initiatives include infrastructure modernization, digital adoption, and improved hinterland logistics to streamline cargo movement and reduce turnaround times. The government is driving policies to enhance automation, encourage private investment, and establish transshipment hubs, strengthening India's position in global trade. Sustainable port development and green infrastructure are also gaining priority, ensuring long-term economic and environmental benefits.



2.2 Cargo Traffic in Major & Non-Major ports in India over six-year period

Cargo Traffic (MT)	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Major Ports	699.17	704.93	672.68	720.05	784.27	843.73
Non-Major Ports	582.61	615.05	577.19	603.56	650.96	680.64

Cargo traffic at India's ports has seen steady growth, with major ports handling 843 MT in 2023-24, a 4.1% increase from the previous year. Non-major ports contributed 695 MT, marking a 6.8% rise. Over the past five years, major ports grew by 16.5% and non-major ports by 19.3%. This growth is driven by expanding port infrastructure, increased trade, and improved logistics capacity, positioning Indian ports to meet rising trade demands.

2.3 Cargo Traffic of Coastal (Domestic) and Overseas cargo:

Financial Year	Major Ports (MT)		Non-major Ports (MT)	
	Coastal cargo	Overseas cargo	Coastal cargo	Overseas cargo
2022-23	183.26	601.01	124.89	526.07
2023-24	195.10	648.63	138.18	542.46

India's port cargo traffic shows a consistent upward trend across both major and non-major ports, driven by increasing trade activities. Major ports experienced a significant increase in overseas cargo, reflecting stronger global trade linkages. Coastal cargo also grew steadily, particularly in non-major ports. The growth of non-major ports, particularly in coastal cargo, highlights an expanding reliance on coastal shipping for domestic logistics. The rise in overseas cargo underscores India's growing role in international trade.

2.4 Share of Overseas Cargo Traffic at Major Ports

Ports	2022-2023		2023-2024	
	Traffic (MT)	Share	Traffic (MT)	Share
Paradip Port	77.0	13.80%	115.0	17.30%
Deendayal Port	123.9	20.60%	101.9	16.00%
JNPT	78.8	13.60%	89.8	13.40%
Vishakhapatnam Port	54.7	9.60%	63.0	9.20%
Chennai Port	43.3	7.50%	50.5	7.56%
SMP Haldia Dock	43.9	7.40%	48.9	7.56%

Ports	2022-2023		2023-2024	
	Traffic (MT)	Share	Traffic (MT)	Share
Mumbai Port	40.9	6.90%	47.6	7.02%
New Mangalore Port	32.5	5.40%	42.5	5.55%
Kamarajar Port	25.9	4.40%	39.3	5.00%
VO Chidambaranar Port	25.3	4.30%	30.2	4.48%
Cochin Port	23.5	3.90%	28.3	4.14%
Mormugao Port	15.6	2.60%	23.8	2.79%

The overall port traffic in India saw significant shifts in 2023-24, with Paradip Port recording the highest growth becoming the leading port. This surge is driven by increased coal and iron ore shipments. Deendayal Port saw a sharp decline which was largely due to the Indian government's ban on non-basmati rice exports, which significantly impacted overseas shipments from the port. This restriction led to a sharp decline in Agri-commodity exports, affecting overall port performance. JNPT, Vishakhapatnam, Chennai, and SMP Haldia ports witnessed moderate growth, attributed to improvements in container handling and infrastructure upgrades. New Mangalore, Kamarajar, and Cochin ports also grew, likely due to higher crude and petroleum product shipments. Mormugao Port had a slight increase, suggesting revival in iron ore exports. Overall, the shift in trade policies, commodity-specific restrictions, and evolving export-import dynamics have influenced the performance of India's major ports in 2023-24.

2.5 Share of Costal cargo traffic at Major Ports

Ports	2022-2023		2023-2024	
	Traffic (MT)	Share	Traffic (MT)	Share
Paradip Port (Odisha)	58.5	31.90%	55.0	28.17%
Mumbai Port	22.5	12.30%	27.7	13.15%
Vishakhapatnam Port	19.1	10.40%	24.5	12.04%
Kamarajar Port (Chennai)	17.8	9.70%	19.1	9.80%
Deendayal Port (Gujarat)	13.7	7.50%	15.8	8.10%
V.O.Chidambaranar Port	12.6	6.90%	14.6	7.50%
Cochin Port	12.1	6.60%	13.0	6.64%
New Mangalore Port	9.2	5.00%	9.6	4.90%
Chennai Port	5.9	3.30%	5.9	3.02%
Haldia Dock (West Bengal)	5.0	2.80%	5.0	2.57%
JNPT(Maharashtra)	5.0	2.70%	5.0	2.56%
Mormugao Port (goa)	1.7	0.90%	2.6	1.24%
Kolkata Dock	0.4	0.20%	0.6	0.31%

The data shows a notable decline in traffic at Paradip Port from 58.5 MT in 2022-23 to 55.0 MT in 2023-24. Conversely, Mumbai and Vishakhapatnam Ports saw significant traffic increases, with Mumbai rising from 22.5 MT to 27.7 MT and Vishakhapatnam from 19.1 MT to 24.5 MT, driven by improvements in container handling and infrastructure upgrades. Other key growth areas include Deendayal, V.O. Chidambaranar, and Mormugao Ports, which benefited from improved bulk cargo operations and infrastructure expansions. However, New Mangalore, Chennai, and Haldia Docks saw stagnant or marginal growth, possibly due to logistical constraints and shifts in trade routes. Overall, the changes highlight a redistribution

of cargo traffic among Indian ports, influenced by commodity demand, infrastructural developments, and evolving trade dynamics.

2.6 Share of overseas cargo traffic at non-Major Ports (MT)

Location	Ports	2022-2023		2023-2024	
		Traffic	Share	Traffic	Share
Gujarat	Gujarat Maritime Board	369.83	70.38%	313.37	57.83%
Andhra Pradesh	Andhra Pradesh Maritime Board	78.38	14.90%	96.96	17.89%
Odisha	Odisha Maritime Board	35.25	6.69%	63.33	11.69%
Maharashtra	Maharashtra Maritime Board	27.36	5.18%	32.27	5.95%
Puducherry	Puducherry Port	4.21	0.80%	26.61	4.91%
Tamil Nadu	Tamil Nadu Maritime Board	9.47	1.80%	8.96	1.65%
Karnataka	Karnataka Ports	1.05	0.20%	0.19	0.04%
Kerala	Kerala	0.18	0.03%	0.15	0.03%
Andaman & Nicobar Island	A&N Island	0.09	0.02%	0.08	0.01%

Gujarat continues to dominate overseas cargo traffic, with the Gujarat Maritime Board handling 369.83 MT in 2023-24, accounting for 70.3% of the total overseas cargo handled by non-major ports. This strong performance reflects Gujarat's strategic industrial base and robust infrastructure investments. Andhra Pradesh followed with 96.96 MT, driven by a rise in regional trade activities. Odisha's overseas cargo stood at 63.33 MT, benefiting from rising port utilization. Maharashtra handled 32.27 MT, although facing constraints due to congestion and regulatory challenges. Tamil Nadu and Puducherry contributed smaller volumes, with limited port capacity constraining further growth. Karnataka, Kerala, and Andaman & Nicobar saw minimal contributions, largely due to lower industrial activity and underdeveloped port infrastructure.

2.7 Share of Coastal cargo traffic at non-Major Ports

Ports	2022-2023		2023-2024	
	Traffic (MT)	Share	Traffic (MT)	Share
Gujarat Maritime Board (GMB)	43.84	35.10%	38.56	29.26%
Maharashtra Maritime Board (MMB)	46.33	37.10%	34.62	26.27%
Andhra Pradesh Government Ports	22.98	18.40%	27.45	20.83%
Odisha Maritime Board	3.25	2.60%	18.40	13.96%
Andaman & Nicobar Islands	1.75	1.40%	7.12	5.40%
Tamil Nadu Maritime Board (TNMB)	0.62	0.50%	3.22	2.44%
Karnataka Maritime Board	0.12	0.10%	1.92	1.46%
Others	5.99	4.80%	0.51	0.38%

The table highlights a notable shift in port traffic and market share across various maritime boards between 2022-23 and 2023-24. Gujarat and Maharashtra Maritime Boards saw a significant decline in traffic and share, likely due to changes in trade routes, policy shifts, and industrial slowdowns. In contrast, Odisha Maritime Board recorded the highest growth, possibly due to rising coal and mineral exports



from the state. Andhra Pradesh ports also saw strong growth driven by increased coastal shipping and industrial expansion. Andaman & Nicobar and Tamil Nadu ports saw major improvements, possibly due to enhanced connectivity and defense-related shipments. The decline in "Others" category suggests a shift in cargo handling towards more developed ports.

2.8 Container Traffic at Major Ports

Location	Ports	2021-22		2022-23		2023-24	
		Tn	TEU	Tn	TEU	Tn	TEU
Kolkata, West Bengal	SMP Kolkata DS	8441	570	8520	569	8600	575
Haldia, West Bengal	SMP Haldia DC	3353	165	2067	107	2200	115
Jagatsinghpur, Odisha	Paradip Port	184	10	192	11	200	12
Visakhapatnam, Andhra Pradesh	Visakhapatnam Port	8583	512	8460	522	8700	535
Chennai, Tamil Nadu	Chennai Port	30925	1602	28377	1470	29000	1500
Chennai, Tamil Nadu	Kamarajar Port	9269	480	10617	550	11000	570
Muttayyapuram, Tamil Nadu	V.O. Chidambaranar	15905	781	14678	734	14800	750
Kochi, Kerala	Cochin Port	10278	736	9986	695	10100	710
Mangaluru, Karnataka	New Mangalore Port	2309	152	2369	166	2400	170
Mormugao, Goa	Mormugao Port	184	14	28	3	35	4
Navha Seva, Maharashtra	JNPT	69092	5685	76194	6190	78000	6300
Mumbai, Maharashtra	Mumbai Port	238	25	225	21	230	23
Kandla, Gujarat	Deendayal Port	8620	493	8572	494	8700	500

The Indian ports show varied trends in container traffic and handling over the last three fiscal years. Kolkata Port (SMP Kolkata DS) and Haldia (SMP Haldia DC) have seen modest increases, with Haldia's tonnage slightly declining but showing a rise in TEUs. Paradip, Visakhapatnam, Chennai, and Kamarajar Ports have all experienced consistent growth, with Chennai maintaining the highest container traffic among Indian ports. Ports like V.O. Chidambaranar, Kochi, and New Mangalore have also shown notable increases due to improved regional trade volumes. Mormugao and Mumbai ports have seen relatively stagnant growth, possibly due to competitive pressures from nearby ports and infrastructural constraints. JNPT continues to lead in both tonnage and TEUs, benefiting from its strong

connectivity and container handling capabilities. Deendayal Port saw stable growth, with slight increases in both categories, reflecting its sustained role in containerized cargo.

2.9 Traffic Handled by Non-Major Ports by Maritime States / UTs (MT)

Location	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Gujarat	370.77	399.20	411.79	387.57	405.39	416.36
Andhra Pradesh	86.29	103.33	99.91	89.64	87.98	101.45
Maharashtra	37.91	45.79	43.66	39.84	52.47	71.26
Odisha	22.60	22.19	35.27	43.03	41.54	38.71
Tamil Nadu	1.10	0.96	11.37	7.41	7.84	9.88
Puducherry	8.12	8.37	10.10	7.33	5.84	10.12
A&N Islands	1.42	1.50	1.85	1.43	1.54	1.88
Karnataka	0.68	1.04	0.94	0.79	0.79	1.06
Kerala	0.14	0.22	0.16	0.11	0.14	0.24
Goa	0.07	0.02	0.01	0.04	0.03	0.00
Lakshadweep	0.00	0.00	0.00	0.12	0.18	0.00

Gujarat consistently handles the highest traffic among non-major ports, demonstrating steady growth due to strategic importance and significant infrastructure investments. Andhra Pradesh, while experiencing fluctuations, has generally increased its cargo volumes, driven by port connectivity and regional trade. Maharashtra has also seen steady growth, supported by its industrial base, and expanding port capacity. Odisha's ports showed initial increases but experienced a slight dip, likely due to shifting cargo routes or competition from neighbouring states. Tamil Nadu's traffic has been volatile, with a slight decline post-2020-21, likely impacted by logistical or industry-specific challenges. Puducherry has shown minimal fluctuations, while regions like Kerala, Karnataka, and the Andaman & Nicobar Islands continue to maintain lower traffic volumes due to limited industrial activity and inadequate port infrastructure.

2.10 Traffic Handled by Major Ports (MT)

Ports	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Paradip (Odisha)	109.30	112.69	114.55	116.13	135.33	141.29
Deendayal(Gujrat)	115.40	122.61	117.57	127.10	137.56	139.12
JNPT (Maharashtra)	70.71	68.45	64.81	76.00	83.86	84.52
Vizag	65.30	72.72	69.84	69.03	73.75	75.08
SMP Kolkata	63.76	63.98	61.37	58.18	65.66	66.40
Mumbai	60.63	60.70	53.32	59.89	63.61	65.42
Chennai	53.01	46.76	43.55	48.56	48.95	51.22
SMP Haldia DC	45.21	46.68	45.47	42.88	48.61	49.54
Kamarajar (Chennai)	34.50	31.75	25.89	38.74	43.51	44.98
New Mangalore (Karnataka)	42.51	39.15	36.50	39.30	41.42	42.89
V.O. Chidambaranar (Tamil Nadu)	34.34	36.08	31.79	34.12	38.04	39.56
Cochin	32.02	34.04	31.50	34.55	35.26	36.14

Ports	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Mormugao (Goa)	17.68	16.02	21.99	18.46	17.33	17.80
SMP Kolkata DS	18.55	17.30	15.90	15.30	17.05	16.86

The port traffic data from 2018-2024 highlights diverse trends across various ports. Paradip, Deendayal, and JNPT have shown steady growth. Paradip saw a remarkable increase, reflecting its expanding capacity and infrastructure. Deendayal also recorded consistent growth, benefiting from rising demand and strategic location advantages. JNPT demonstrated moderate growth, reflecting market stability and operational improvements. Ports like Visakhapatnam, SMP Kolkata, and Mumbai displayed growth with fluctuations, driven by shifts in regional trade dynamics. Chennai and Kamarajar saw moderate increases, attributed to improved efficiency and rising demand, while New Mangalore, V.O. Chidambaranar, and Cochin showed positive growth, supported by stronger regional trade. Mormugao and SMP Kolkata DS exhibited stagnant growth, likely influenced by regional economic factors and infrastructural constraints.

2.11 Major Port-wise Capacity Utilization

Ports	Capacity		Traffic		Utilisation (%)	
	2022-23	2023-24	2022-23	2023-24	2022-23	2023-24
Paradip Port (Odisha)	289.8	310.0	135.3	153.5	46.70%	49.50%
Deendayal Port (Gujarat)	267.1	275.0	137.6	160.3	51.50%	58.30%
Jawaharlal Nehru Port Authority	141.4	150.0	83.9	98.5	59.30%	65.70%
Chennai Port Authority	135.0	140.0	49.0	56.0	36.30%	40.00%
Visakhapatnam Port Authority	134.2	140.5	73.8	83.7	55.00%	59.60%
V.O. Chidambaranar Port (Karnataka)	111.5	115.5	38.0	48.6	34.10%	42.10%
New Mangalore Port Authority	109.0	115.0	41.4	50.2	38.00%	43.70%
Kolkata Port Authority	92.8	100.5	65.7	71.8	70.80%	71.40%
Kamarajar Ports (Chennai)	91.0	115.0	43.5	70.0	47.80%	60.90%
Mumbai Port Authority	84.0	90.0	63.6	72.3	75.70%	80.30%
Cochin Port Authority	78.6	80.5	35.3	42.7	44.90%	53.00%
Mormugao Port Authority (Goa)	63.4	70.0	17.3	25.3	27.30%	36.10%

India's major ports are witnessing steady growth in capacity and traffic, with Paradip, Deendayal, and Jawaharlal Nehru Port leading in both expansion and utilization. Notably, Deendayal Port has shown a significant surge in traffic, reflecting its increasing role in trade and logistics. Kolkata Port continues to maintain one of the highest utilization levels, emphasizing its efficiency despite limited expansion. Kamarajar Port has demonstrated remarkable growth in traffic, showcasing its rising strategic importance. Meanwhile, Mumbai Port stands out with consistently high utilization, highlighting its critical role in India's maritime

trade. The overall trend signals a push towards enhanced infrastructure and efficiency, crucial for meeting the growing demands of global and domestic trade.

2.12 Non-Major Port-wise Capacity Utilisation

Ports	Capacity		Traffic		Utilisation (%)	
	2022-23	2023-24	2022-23	2023-24	2022-23	2023-24
Gujarat	552.0	575.0	416.4	445.7	75.40%	77.50%
Andhra Pradesh	207.0	215.0	101.5	108.4	49.00%	50.40%
Maharashtra	127.8	130.0	71.3	75.5	55.80%	58.10%
Odisha	65.0	70.0	38.7	41.9	59.60%	59.80%
Goa	25.1	26.0	0.0	0.1	0.00%	0.40%
Puducherry	18.0	18.5	10.1	11.2	56.40%	60.30%
Tamil Nadu	9.0	12.0	9.9	11.5	109.70%	95.40%
Lakshadweep	5.8	6.0	0.0	0.0	0.00%	0.00%
Karnataka	5.0	6.0	1.1	1.4	21.10%	22.50%
Andaman & Nicobar Islands	4.1	4.5	1.9	2.1	45.80%	46.90%
Kerala	1.1	1.2	0.2	0.3	22.50%	26.70%

India's port sector continues to expand, with Gujarat leading in capacity and traffic, reinforcing its status as the country's maritime hub. Andhra Pradesh and Maharashtra show steady growth, highlighting their strategic importance in trade. Tamil Nadu stands out with high utilization, indicating a need for capacity expansion to sustain future demand. Odisha and Puducherry exhibit moderate growth, while Lakshadweep and Goa remain underutilized, reflecting untapped potential. The overall trend suggests increasing trade activity, emphasizing the necessity for infrastructure enhancement and efficiency improvements across key coastal states.

2.13 Upcoming Ports in India as of December 2024

Port Name	Status, Expected Date	Capacity (MT)	Details (Updated with Shipping Lines)	Categories of Ships Accessible
Vadhvan Container Port	Under-Construction, December 2025	254	- Positioned as India's next major deep-sea port. - Targeting Maersk, MSC, and CMA CGM for global connectivity.	Ultra-large container vessels (ULCVs), Bulk carriers
Tajpur Port (West Bengal)	Under-Construction, March 2025	~85	- Aimed at boosting eastern India's trade potential. - Type: Deep-Water Transshipment Port - Will serve MSC, Evergreen, and Hapag-Lloyd for transshipment services.	Container ships, Dry bulk carriers
Machilipatnam Port (Andhra Pradesh)	Under-Construction, June 2025	35-40	- Enhancing agricultural and coastal exports.	Coastal ships, Bulk carriers,

Port Name	Status, Expected Date	Capacity (MT)	Details (Updated with Shipping Lines)	Categories of Ships Accessible
			- Type: Coastal & Regional Port - Expected to serve regional trade and domestic shipping networks.	Feeder vessels
Dighi Port Expansion (Maharashtra)	Under-Construction, March 2025	~60	-- Upgrading to accommodate bulk, containerized, and liquid cargo. - Type: Multipurpose Port - Likely to attract DP World, APM Terminals, and NYK Line for logistics support.	General cargo ships, Oil tankers, Ro-Ro vessels
Kattupalli Port Expansion (Tamil Nadu)	Under-Construction, February 2025	Up to 115	- Improving container and multipurpose handling. - Type: Multipurpose & Transshipment Port - Already serves APL, MSC, and ONE (Ocean Network Express) for transshipment routes.	Container ships, Multipurpose vessels
Vizhinjam Port (Kerala)	Under-Construction, February 2025	20	- Type: International Transshipment Port - Aims to compete with Colombo for Indian transshipment traffic. - Designed for Asia-Europe and Middle East shipping routes.	Ultra-large container ships (ULCVs), LNG carriers

2.14 Trans-shipment Ports in India December 2024

Port	State	Capacity	Status
Vizhinjam International Seaport	Kerala	1 million TEUs	Operational (2024)
International Container Transshipment Port (ICTP)	Galathea Bay, Great Nicobar Island	16 million TEUs (at full capacity by 2058)	Phase-wise development; DPR in progress;
Vallarpadam International Container Transshipment Terminal (ICTT)	Cochin, Kerala	1 million TEUs	Fully Operational
Kanyakumari Region (Planned)	Tamil Nadu	TBD	Identified under Maritime Vision 2030

Chapter 3: Inland Container Depots (ICD) and Container Freight Stations (CFS)

3.1 Background

Inland Container Depots (ICDs) and Container Freight Stations (CFSs) are key logistics hubs that facilitate the storage, handling, and customs clearance of containerized cargo away from traditional seaports. ICDs are typically located in the hinterlands, enabling smooth cargo movement via rail or road, while CFSs are closer to ports and serve as transit points for consolidation and deconsolidation of shipments. These facilities help reduce port congestion, improve supply chain efficiency, and lower transportation costs by streamlining cargo handling and documentation processes. Inland Container Depots (ICDs) and Container Freight Stations (CFSs) are critical components of India's logistics infrastructure, facilitating efficient cargo handling and storage for both domestic and international trade. These facilities function as key hubs for containerized cargo, enabling seamless intermodal transfers between road, rail, and maritime transport.

To enhance logistics efficiency, upcoming developments in 2025 focus on modernizing ICDs and CFSs with improved digital tracking, automation, and enhanced multimodal connectivity. Government initiatives aim to streamline customs clearance, reduce transit times, and lower logistics costs, strengthening India's position as a global trade hub. Strategic expansion of these facilities near industrial zones and transport corridors is expected to drive economic growth and boost trade competitiveness.

3.2 Operational & Central/State Operated ICD and CFS

States	CFS		ICD	
	2022-23	2023-24	2022-23	2023-24
Andhra Pradesh	3	4	0	1
Chandigarh	0	0	1	1
Chhattisgarh	0	0	1	1
Goa	1	1	0	1
Gujarat	11	15	4	7
Himachal Pradesh	0	0	1	1
Haryana	2	2	4	5
Jammu & Kashmir	0	0	1	1
Jharkhand	0	0	1	1
Karnataka	5	6	0	1
Kerala	6	6	2	2
Maharashtra	19	20	5	7
Madhya Pradesh	0	0	5	5
Odisha	0	1	1	1
Punjab	2	2	0	1
Rajasthan	2	2	7	7
Tamil Nadu	11	12	5	6
Uttar Pradesh	4	5	6	7
Uttarakhand	0	0	2	2
West Bengal	5	6	1	2
Telangana	1	1	1	2

The table reflects the operational data for Central/State-operated ICDs (Inland Container Depots) and CFSs (Container Freight Stations) across various states for FY 2023-24 compared to FY 2022-23. Significant variations in the numbers indicate the evolving logistics landscape, with states like Gujarat, Maharashtra, Tamil Nadu, and Uttar Pradesh seeing notable operations in both ICDs and CFSs. Andhra Pradesh has also shown an increase in CFS operations. Conversely, some states such as Madhya Pradesh and Jammu & Kashmir saw no change in the number of ICDs despite having operational facilities. The changes in traffic can be attributed to factors like increased industrial activity, the development of infrastructure, and shifts in trade routes or port capacities in certain regions. States such as Gujarat and Maharashtra have experienced traffic boosts due to improved connectivity and growing trade demand, while others have faced operational constraints or lower trade volumes.

3.3 Under Implementation & Central / State Operated ICD, CFS

States	CFS		ICD	
	2022-23	2023 -24	2022-23	2023-24
Andhra Pradesh	3	3	1	1
Chhattisgarh	0	1	1	1
Gujarat	0	1	1	1
Haryana	0	2	2	1
Jammu & Kashmir	0	1	1	1
Karnataka	0	1	1	1
Kerala	2	2	0	1
Maharashtra	1	2	2	2
Odisha	0	1	1	1
Punjab	0	1	1	1
Rajasthan	0	1	1	1
Tamil Nadu	4	4	1	1
Uttar Pradesh	0	2	2	2
West Bengal	2	2	0	1
Telangana	1	1	0	0

In FY 2023-24, several states experienced notable changes in container freight station (CFS) and inland container depot (ICD) traffic. Andhra Pradesh, Tamil Nadu, and West Bengal maintained steady CFS volumes, while Maharashtra and Uttar Pradesh saw slight declines. States like Chhattisgarh, Gujarat, Haryana, Odisha, Punjab, and Rajasthan reported reduced CFS activity, with Haryana being the only state showing an increase in ICDs. Kerala, Tamil Nadu, and West Bengal sustained stable port movements, whereas Maharashtra and Uttar Pradesh saw fluctuations in ICD traffic.

The observed variations in port traffic can be attributed to multiple factors, including shifts in industrial output, policy changes, infrastructure developments, and regional trade patterns. Declines in some states may result from supply chain disruptions or shifts in logistics hubs, while increases could be driven by enhanced connectivity, rising exports, and government incentives for trade facilitation.

3.4 Operational and Privately Operated ICD, CFS

States	CFS		ICD	
	2022-23	2023-24	2022-23	2023-24
Andhra Pradesh	3	4	2	3
Gujarat	13	15	3	4
Haryana	0	0	3	5
Karnataka	2	3	0	0
Kerala	4	5	0	0
Maharashtra	22	25	4	5
Madhya Pradesh	0	0	2	3
Odisha	0	0	1	2
Pondicherry	2	2	0	0
Punjab	3	4	2	3
Tamil Nadu	37	40	4	5
Uttar Pradesh	5	6	2	3
West Bengal	6	7	0	0
Telangana	1	2	0	0

The overall port traffic for 2023-24 has shown a notable increase across several states, particularly in Maharashtra, Tamil Nadu, Gujarat, and West Bengal. Maharashtra saw the highest surge, with CFS increasing from 22 to 25 and ICD from 4 to 5, reflecting improved infrastructure and trade activities. Tamil Nadu also experienced growth, with CFS rising from 37 to 40 and ICD from 4 to 5, indicating stronger logistics and export demand. Gujarat, a key industrial hub, witnessed an increase in both categories, reinforcing its role in national trade.

3.5 Under Implementation & Privately Operated ICD, CFS

States	AFS		CFS		ICD	
	2022-23	2023-24	2022-23	2023-24	2022-23	2023-24
Andhra Pradesh	0	5	4	7	0	2
Bihar	0	0	0	0	1	1
Delhi	1	1	0	5	0	0
Gujarat	0	0	4	6	2	4
Haryana	0	0	0	2	1	3
Karnataka	1	2	0	3	0	0
Maharashtra	0	0	1	10	1	4
Punjab	0	0	0	3	1	2
Tamil Nadu	0	1	2	6	0	0
Telangana	0	0	0	2	1	2

There has been a noticeable increase in CFS across multiple states, with Maharashtra, Gujarat, and Andhra Pradesh showing the highest activity. Andhra Pradesh saw a sharp rise in both CFS and ICD compared to the previous year, while states like Tamil Nadu and Telangana also witnessed moderate growth in CFS and ICD.

3.6 Some major ICDs

Sr. No.	Name of ICD	Location	State
Rail ICDs with CFS			
1	Tughlakabad (TKD)	New Delhi	Haryana
2	Sanathnagar (SNF)	Hyderabad	Andhra Pradesh
3	Anarpati	East Godavari (AP)	Andhra Pradesh
4	Nagpur	Nagpur	Maharashtra
5	Coimbatore	Coimbatore	Tamil Nadu
6	Tondiarpet	Chennai	Tamil Nadu
7	Agra	Belanganj	Uttar Pradesh
8	Moradabad	Moradabad	Uttar Pradesh
9	Guntur	Guntur	Andhra Pradesh
10	New Mulund(E)	Mumbai	Maharashtra
11	Whitefield	Bangalore	Karnataka
12	Chirala	Dist. Guntur (AP)	Andhra Pradesh
13	Sabarmati	Ahmedabad	Gujarat
14	Amingaon	Guwahati	Assam
15	Madurai	Madurai	Tamil Nadu
16	Dhandarikalan	Ludhiana	Punjab
17	Kanpur	Kanpur	Uttar Pradesh
18	Daulatabad	Aurangabad	Maharashtra
19	Cossipore	Kolkata	West Bengal
20	Jodhpur	Jodhpur	Rajasthan
21	Kanakpura	Jaipur	Rajasthan
22	Miraje	Miraje	Maharashtra
23	Balasore	Balasore	Orissa
24	Bhusawal	Bhusawal	Maharashtra
25	Riwari	Haryana	Haryana

Sr. No.	Name of ICD	Location	State
26	Dadri(Greater Noida)	Delhi	Haryana
27	Raipur	Khapa	Madhya Pradesh
28	Tirupur	Tirupur	Tamil Nadu
Road ICDs with CFS			
29	Mulund(W)	Mumbai	Maharashtra
30	Pithampur	Indore	Madhya Pradesh
31	Tuticorin	Milavittan	Tamil Nadu
32	Babarpur	Panipat	Haryana
33	Malanpur	Gwailior	Madhya Pradesh
34	Pondicherry	Pondicherry	Tamil Nadu
ICD without CFS			
35	kochi	Kochi	Kerala
36	Chincwad	Pune	Maharashtra
37	Wadi Bunder	Mumbai	Maharashtra
38	Vadodara	Vadorara	Gujarat
39	Jamshedpur	Tatanagar	Jharkhand
40	D'Node	Navi Mumbai	Maharashtra
Port Side Container Terminal			
41	Harbour of Madras	Chennai	Tamil Nadu
42	Kandla	Kandla	Gujarat
43	Haldia	Kolkata	West Bengal
44	Shalimar	Kolkata	West Bengal
45	Vizag (Visakhapatnam)	Vizag (Visakapatnam)	Andhra Pradesh
Empty Park (Rail Linked)			
46	Ballabgarh	Uttar Pradesh	Uttar Pradesh

3.7 Upcoming ICD / CFS / AFS (Air Freight Stations)

Location	AFS	CFS	ICD
Bayyavaram, Andhra Pradesh		1	
Jharsuguda, Odisha			1
Devanahalli Village, Karnataka	1		
Village Janoli, Haryana			1

Naya Raipur, Chhattisgarh			1
Viramgam, Gujarat			1
Village Zarpara, Gujarat			1
GroMh Centre Bawal, Haryana			1
Hindaun, Rajasthan			1
Loni, Uttar Pradesh			1
Modi Nagar, Uttar Pradesh			1
Rangreth, Jammu & Kashmir			1
Surareddypalem, Andhra Pradesh			1

Out of 47 upcoming stations previous year, 40 were ready and operational. Currently rest 7 are still under construction including 7 more new stations.

Chapter 4: Inland Waterways

4.1 Background

India's inland waterways comprise of 111 officially notified National Waterways that aims to enhance trade efficiency, reduce transportation costs, and promote eco-friendly cargo movement. Key waterway corridors are being developed to integrate seamlessly with rail and road networks, ensuring smooth multimodal connectivity. Government initiatives focus on upgrading infrastructure, improving navigability, and boosting regional trade, aligning with broader goals of strengthening India's logistics ecosystem. The ongoing expansion of inland water transport highlights its potential as a sustainable alternative to conventional freight movement.

4.2 Major National Waterways (NW) in India

National Waterway	Water Body	Between	Length (km)	Remarks
NW-1	Ganga - Bhagirathi-Hooghly River	Haldia (Sagar) and Allahabad	1620	Operational; key for cargo movement in Eastern India.
NW-2	Brahmaputra River	Bangladesh Border and Sadiya	891	Operational; vital for trade with Northeast India.
NW-3	West Coast Canal	Kottapuram - Kollam	168	Operational; enhances coastal connectivity.
NW-3	Udyogmandal Canal	Kochi to Pathalam Bridge	23	Operational; supports industrial transport in Kochi region.
NW-3	Champakara Canal	Kochi - Ambalamugal	14	Operational; facilitates local transport needs.
NW-4	Kakinada-Puducherry stretch of Canals	Integrated Bhadrachalam - Rajahmundry stretch of River Godavari, Wazira to Vijayawada stretch of River Krishna	1078	Freight activities commenced with Ro-Ro services operational between Ibrahimpatnam and Lingayapalem.
NW-4	Krishna River	Muktyala to Vijayawada	82	Under development, significant cargo movement expected.

National Waterway	Water Body	Between	Length (km)	Remarks
NW-4	Krishna River	Vijayawada - Kakinada	233	Under development; part of the integrated water transport plan.
NW-4	Krishna River	Rajahmundry to Polavaram	Not specified	DPR underway; expected to enhance regional connectivity.
NW-4	River Krishna	Wazirabad to Galagali	628	DPR underway; crucial for local agricultural transport.
NW-4	River Godavari	Bhadrachalam to Nasik	1184	Under development; key for enhancing cargo transport in the region.
NW-5	Brahmani River & Mahanadi Delta System & East Coast Canal	Talcher-Dhamra, Geonkhali-Charbatia, Charbatia-Dhamra, Mangalgadi-Paradip	623	Construction underway; aims to boost trade in Odisha and surrounding areas.

As part of efforts to enhance coastal and inland water transport, the government has prioritized key projects under the Sagarmala initiative. National Waterway-5, covering the Mahanadi and Brahmani delta along with the East Coast Canal, is being developed in phases to support commercial cargo movement. With a focus on coal transportation, its phased development aims to alleviate congestion in rail and road networks. Critical infrastructure upgrades, including barrages, bridge modifications, and navigational enhancements, are progressing under expert guidance. The formation of a Special Purpose Vehicle (SPV) and funding strategies involving debt and equity ensure the project's financial viability. Ongoing technical studies and feasibility assessments are accelerating the transformation of India's inland water transport sector, reinforcing its role in long-term logistics planning.

*Sagarmala Scheme initiative

National Waterway	Water Body	Between	Length (km)	Remarks
NW-3	West Coast Canal	Kollam to Kottapuram	168	Extended to Chavakkad-Ponnani; further extension declined due to low cargo.
NW-4	Krishna River	Ibrahimpatnam to Lingayapalem	Not Disclosed	Operational with Ro-Ro services for stone chip transportation.

National Waterway	Water Body	Between	Length (km)	Remarks
NW-5	Mahanadi-Brahmani Delta	Paradip/Dhamra to Talcher	332	Phased development; focus on coal transportation and barrages/check dams.

The Indian Government is prioritizing maritime infrastructure through significant projects such as the Vadhvan Major Port in Maharashtra, approved with an investment of INR 76,220 crore. This port will feature multiple container terminals and berths, targeting a capacity of 298 million metric tons annually. Inland Water Transport (IWT) projects, including developments on National Waterway-4 (NW-4) and NW-3, focus on enhancing cargo movement efficiency. NW-4 now supports Roll-on/Roll-off (Ro-Ro) services, reducing fuel costs and environmental impact. While NW-3 was extended between Chavakkad and Ponnani, further expansion has been restricted due to limited cargo potential.

Under the Sagarmala Scheme, 13 projects in Andhra Pradesh have been funded, with key focus areas like Ro-Pax services, port modernization, and fishing harbors. Coastal shipping reforms include reduced GST on bunker fuels, freight subsidies, and simplified licensing. Additionally, 75 lighthouses have been transformed into tourist sites, showcasing efforts to diversify port utility. The Kalugh at terminal in Bihar, operationalized in 2024, is another major milestone in expanding India's logistics network. These initiatives collectively aim to enhance India's position in global trade and ensure sustainable economic development.

4.3 Roll on-Roll off (RORO) Ferry Operations

Ro-Ro Service	Route & Status	Description
Ghogha(Bhavnagar)-Hazira(Surat) Ro-Ro Ferry	Ghogha to Hazira (Gujarat); Operational	Connects the Ghogha and Hazira ports across the Gulf of Khambhat, significantly reducing travel time between Saurashtra and South Gujarat.
Mumbai-Goa Ro-Ro Ferry	Mumbai to Goa; Planned	Planned service aimed at connecting Mumbai and Goa, facilitating quicker transport of vehicles, and improving connectivity between the two states.
Bhaucha Dhakka-Mandwa Ro-Ro Ferry	Bhaucha Dhakka (Mumbai) to Mandwa (Alibaug); Operational	Connects Mumbai to Alibaug, allowing vehicles to bypass the congested road routes and providing a faster, more efficient way to travel.

Chapter 5: Railway Terminals & Corridors

5.1 Background

Railway terminals and corridors play a vital role in India's logistics network by enabling efficient freight and passenger movement. The government is upgrading existing corridors and developing new ones to streamline freight transport, lower logistics costs, and decongest rail routes. Upcoming projects emphasize expanding terminal infrastructure, integrating smart technology, and boosting regional connectivity to strengthen supply chain efficiency. These initiatives align with the broader vision of making rail transport more sustainable, cost-effective, and competitive within India's logistics ecosystem.

5.2 Indian Railway HDN Routes

The High-Density Network consists of the busiest railway routes in India, primarily covering the Golden Quadrilateral (Delhi-Mumbai-Chennai-Kolkata) and its diagonals. These routes handle the highest passenger and freight traffic, often running at nearly full capacity, making them crucial for railway efficiency and expansion projects like electrification and track doubling. As of 2024, there have been no new High-Density Networks (HDNs) established in the Indian Railways.

The existing HDNs include major routes such as Delhi-Howrah, Delhi-Mumbai, and Mumbai-Howrah, among others. The focus has been on enhancing the capacity and efficiency of these routes through various infrastructure projects aimed at improving connectivity and reducing congestion. Since December 2023, the Indian government has made significant strides to upgrade HDN routes. Key initiatives include the doubling and tripling of existing lines, upgrading speed potentials to 130 KMPH for several routes, and targeting speeds of up to 160 KMPH for critical corridors like New Delhi-Mumbai.

Additionally, a substantial capital expenditure allocation of INR 2.62 lakh crore for FY 2024 has been earmarked to support these enhancements, with a focus on safety measures and infrastructure development under the PM Gati Shakti Mission. This comprehensive approach aims to improve logistics efficiency and passenger experience while supporting industrial growth across strategic corridors.

5.3 Indian Railways HUN Routes

The High-Utility Network includes routes that may not be as congested as the HDN but still play a critical role in freight and passenger movement. These routes contribute significantly to revenue generation and operational efficiency, supporting industries, ports, and major commercial hubs across the country.

As of 2024, there are no newly identified Highly Utilized Networks (HUNs) in the Indian Railways. However, significant improvements have been made to existing HUN routes since December 2023. The Indian government has focused on enhancing infrastructure to boost capacity and efficiency across these critical railway lines. Key initiatives include the doubling of single-line tracks, tripling or quadrupling of routes covering 3,000 route kilometers, and upgrading speed potentials on major corridors to facilitate faster freight and passenger movement.

Additionally, the Indian Railways is working towards achieving a freight loading target of 2,024 million tonnes by the end of 2024. This involves completing various infrastructure projects

aimed at increasing network capacity and train speeds. Specific projects include the commissioning of dedicated freight corridors, electrification of routes, and modernization of railway stations under the Amrit Bharat Station Scheme. These enhancements are part of a broader vision to transform Indian Railways into a more efficient and environmentally sustainable transport system.

5.4 Capacity Utilisation for HDN & HUN Routes

Utilization	HDN Network -Km		Change (%)	HUN Network - KM		Change (%)
	2022-23	2023-24		2022-23	2023-24	
0%-70%	210	189	-10%	5,642	5,896	4.50%
70%-100%	1,800	2,003	11.30%	6,502	6,887	5.90%
100%-150%	6,000	6,326	5.40%	8,100	8,361	3.20%
>150%	2,300	2,450	6.50%	2,950	3,121	5.80%
Total	10,310	10,969	6.40%	23,194	24,266	4.60%

The High-Density Network (HDN) expanded by 6.4%, with lower-utilization routes decreasing while higher-utilization segments increased, indicating rising rail congestion. Similarly, the High-Utility Network (HUN) grew by 4.6%, with overburdened routes increasing by nearly 6%, highlighting higher freight and passenger loads. This rise is driven by freight expansion under PM Gati Shakti, Dedicated Freight Corridors (DFCs), and electrification efforts, which have enhanced rail capacity and efficiency. However, congestion challenges persist, necessitating track expansion, automation, and new corridors to balance network load. Future digitization and electrification initiatives aim to distribute utilization more evenly across railway networks.

5.5 Rake km for Key Routes

Route	Rake Km 2018	Rake Km 2026	Rake Km 2031	Rake Km 2041	Rake Km 2051
Delhi - Mumbai via Kota – Ratlam	1,42,646	1,28,116	1,28,065	2,53,709	6,07,395
Mumbai - Howrah via Nagpur – Jharsuguda	1,53,322	1,91,886	2,84,575	3,02,143	5,56,427
Delhi - Chennai via Jhansi - Bhopal	1,15,208	1,94,157	1,91,792	3,29,236	5,14,105
Amritsar - Andal via Mughal Sarai - Patna	88,587	1,18,788	1,85,734	2,37,116	4,36,096
Kharagpur - Udhna via Bhusawal	1,27,437	1,09,995	1,89,481	1,89,481	4,11,105
Vasco - Machilipatnam via Dharwad – Vijayawada	39,373	37,102	52,356	1,31,095	3,97,948
Vizianagaram/Paradeep – Kota	1,44,061	2,01,973	2,78,433	3,71,369	3,80,241
Delhi - Guwahati via Moradabad - Chhapra – Katihar	64,102	2,13,776	2,60,253	3,77,942	3,42,465
Delhi - Howrah via Kanpur - Gaya	1,25,474	72,888	1,74,326	2,04,722	3,41,716
Kolkata - Vijayawada via Jharsuguda – Sambalpur	65,425	1,43,314	2,01,958	2,65,061	2,98,949

Route	Rake Km 2018	Rake Km 2026	Rake Km 2031	Rake Km 2041	Rake Km 2051
Bandel - Dibrugarh via Azimganj - Barsoi	32,330	77,377	88,269	1,44,652	2,74,620
Ajmer - Dindigul via Nanded	27,163	21,154	37,437	1,28,934	2,68,808
Chandigarh - Rajkot Via Panipat - Rewari	74,797	71,354	1,44,795	1,78,936	2,25,608
Jhansi - Muzaffarpur – Katni	43,542	72,708	1,12,270	1,90,810	2,15,763
Manmad - Kanyakumari via Hubli - Birur	37,650	42,495	67,090	1,13,590	1,87,530
Mumbai - Chennai via Guntakal - Hospet	39,624	32,510	47,117	1,07,025	1,74,203
Firozpur - Mundra Port via Bhatinda-Jakhal	53,199	50,325	93,634	1,13,955	1,70,565
Mangalore - Kanyakumari via Shoranu	17,076	17,111	27,900	40,100	58,892

5.6 Dedicated Freight Corridors

Considering the substantial volume of freight circulating within the network, identification of key freight corridors where the proportion of freight traffic exceeds 50%. These corridors are prioritized for the advancement of Dedicated Freight Corridors (DFCs).

Freight Corridor	Current Status, Expected completion	Remarks
Kharagpur - Vishakapatnam - Vijayawada - Guntakal	Under development, March 2026	This corridor is crucial for connecting major industrial hubs in Eastern India, facilitating faster movement of goods between ports and hinterland.
Delhi - Agra - Bhopal - Nagpur - Vijayawada - Chennai	Operational, Fully Completed - 2024	This corridor enhances connectivity between northern and southern regions, significantly reducing transit times for various commodities.
Agra - Mughalsarai - Gaya - Dhanbad - Kolkata	Under development, December 2025	This route is vital for coal transportation and other bulk goods, linking key industrial areas with the eastern coast.
Mumbai - Nashik - Nagpur - Raipur - Bilaspur - Jharsuguda - Jamshedpur - Kharagpur	Operational, Fully Completed - 2024	This extensive corridor supports heavy freight movement across multiple states, improving logistics for manufacturing and mining sectors.
Mumbai - Pune - Guntakal - Chennai	Under development, June 2026	This corridor is essential for enhancing trade between Maharashtra and Tamil Nadu, focusing on agricultural and industrial products.

Freight Corridor	Current Status, Expected completion	Remarks
Delhi - Kota - Surat - Mumbai	Operational, Fully Completed - 2024	This corridor improves access to ports from northern regions, facilitating quicker export-import processes.
Delhi - Ajmer - Ahmedabad	Under development, September 2026	This route is designed to enhance connectivity between North and West India, supporting trade and commerce in the region.

5.6.1 Proposed Phasing of DFC Network

Phasing	2026	2031	2041	2051
Length (Km)	2,807	3,278	1,206	751
New DFC Corridors	Eastern DFC, 1,324 Km	East Coast DFC, 1,265 Km (Kharagpur to Vijayawada)	North South DFC, 1,206 Km (Itarsi to Chennai via Nagpur and Vijayawada)	North South DFC, 751 Km (Palwal to Itarsi)
	Western DFC 1,483 Km	East West DFC, 2,013 Km (Palghar to Dankuni and EDFC Connectors)		
		Eastern DFC, 515 Km (Sonnagar to Dankuni)		

5.6.2 Current Status of DFC Network

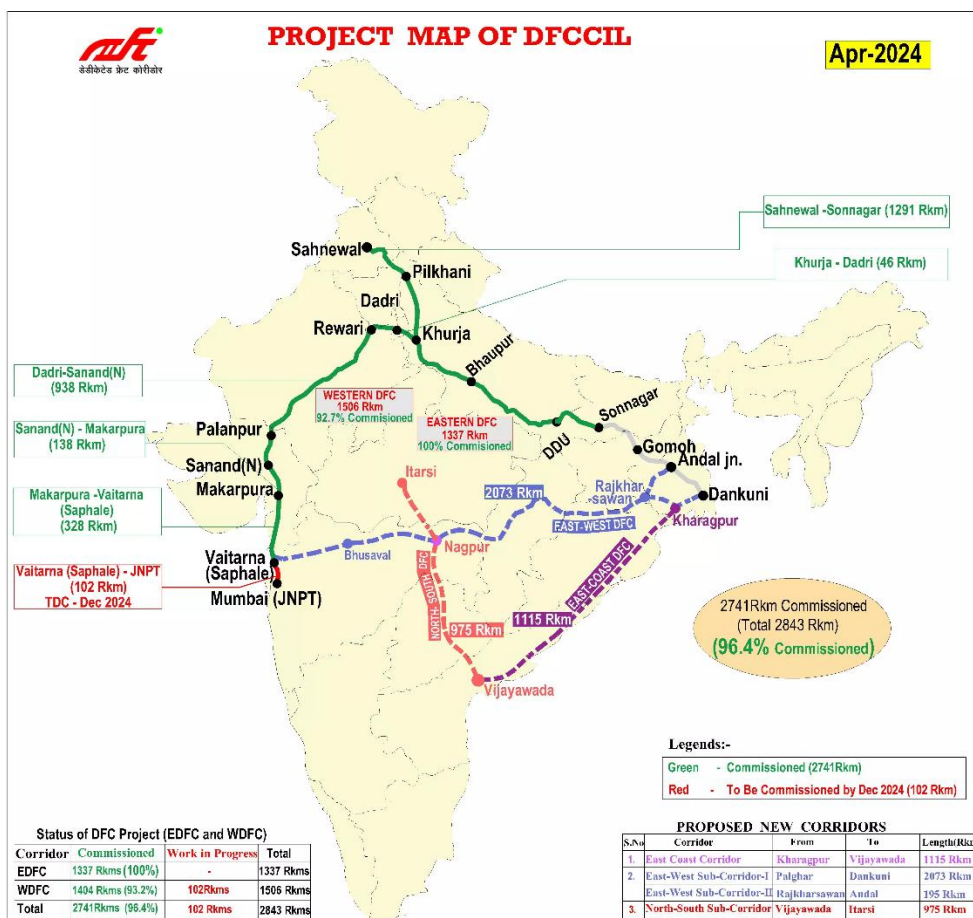


Figure 1: Project Map of DFCCIL

5.6.3 Status of Eastern & Western DFC's as of December 2024

Parameter	Eastern DFC	Western DFC
Total Length	1,337 km	1,506 km
Commissioned	1,337 km (100% complete)	1,406 km (93.4% complete)
Target Commissioning	Fully operational	Expected completion by December 2025
Financial Progress (Works)	96%	93.2%

5.6.4 Detailed status of DFC's as of December 2024

Section/Package	Length (km)	Commissioning	Remarks	Financial Progress
WDFC - Western Dedicated Freight Corridor				
Dadri - Rewari	127	Commissioned	Inaugurated on Jan 25, 2024; now fully operational with an average freight speed of 75 km/h.	93%
Rewari - Madar	306	Commissioned	Inaugurated on Jan 7, 2021; handles double-stack container trains.	93%
Madar - Palanpur	353	Commissioned	Inaugurated on June 18, 2022; increasing coal and container traffic.	93%
Palanpur - Makarpura	290	Commissioned	New Palanpur-Mahesana (75 km) commissioned on Sep 30, 2022; full operational integration completed.	93%
Makarpura - Sachin	135	Commissioned	Inaugurated on March 12, 2024; improving freight movement between Surat and Vadodara.	93%
Sachin - Vaitarna	193	Commissioned	Commissioned in March 2024; playing a key role in Maharashtra-Gujarat freight movement.	93%
Vaitarna - JNPT	102	Expected by Dec 2025	Construction in final stages; expected to enhance port connectivity at Jawaharlal Nehru Port Trust (JNPT).	93%
EDFC - Eastern Dedicated Freight Corridor				
Sahnewal - Pilkhani	179	Commissioned	Inaugurated on March 12, 2024; improved coal and steel transportation.	95%
Pilkhani - Khurja	222	Commissioned	Inaugurated on March 12, 2024; contributes to seamless movement of bulk goods.	95%
Khurja - Dadri	46	Commissioned	Inaugurated on Jan 25, 2024; crucial for containerized freight movement.	95%
Khurja - Bhaupur	351	Commissioned	Operational since Dec 29, 2020; one of the first commissioned routes.	95%

Section/Package	Length (km)	Commissioning	Remarks	Financial Progress
Bhaupur - DDU	402	Commissioned	Inaugurated on Dec 18, 2023; significant increase in freight traffic observed.	95%
DDU - Sonnagar	137	Commissioned	Inaugurated on July 7, 2023; integrated with eastern rail freight network.	95%

5.7 Roll on-Roll off (RORO) Railway Operations

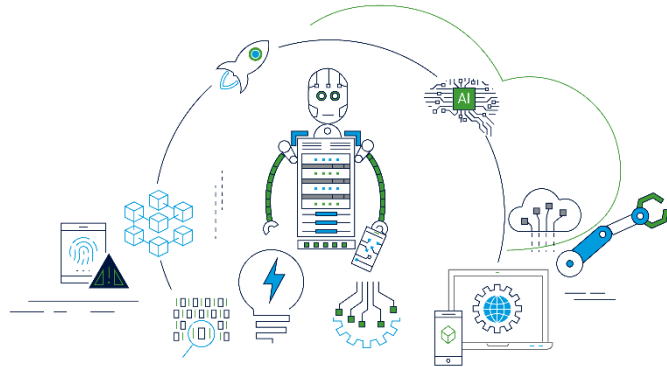
The Roll-on-Roll-off (RO-RO) service was first implemented on Konkan Railway in 1999 and has been consistently operational on the Diesel route. However, on electrified routes, the running of RO-RO service faces operational constraints due to the presence of Overhead Equipment (OHE). Roll On Roll Off service is presently available between the following points :

Ro-Ro Service	Route	Description
Kochi-Kottayam Ro-Ro Service	Kochi to Kottayam	Operated by Indian Railways, this service connects the Kochi and Kottayam regions in Kerala, allowing easy transport of vehicles across these areas.
Konkan Railway Ro-Ro Service	Kolad (Maharashtra) to Surathkal (Karnataka)	Operated By Konkan Railway Corporation Limited (KRCL).

Chapter 6: Multi Modal Logistics Parks (MMLP)

6.1 Introduction to MMLP

A Multi-Modal Logistics Park (MMLP) is an integrated infrastructure facility designed to support the efficient and seamless movement of goods using various transport modes, such as road, rail, air, and sea. The primary objective of these parks is to streamline the entire logistics chain, providing one-stop solutions for cargo handling, storage, and distribution. These parks typically feature modern warehousing, container yards, and transportation hubs, all



designed to allow goods to be transferred between different modes of transport without unnecessary delays or costs. The MMLPs aim to enhance connectivity and reduce bottlenecks, improving overall supply chain efficiency.

The Government of India defines MMLPs as facilities where multiple modes of transport are integrated, enabling seamless transition of cargo between road, rail, and other transport forms. These parks are part of the broader strategy to modernize India's logistics sector, which is crucial for economic development. India's logistics sector is underdeveloped compared to global standards, leading to inefficiencies such as high logistics costs, poor infrastructure, and limited intermodal connectivity. The National Industrial Corridor Development and Implementation Trust (NICDIT) and the Ministry of Commerce and Industry have emphasized the importance of MMLPs as a key component in the Make in India initiative and in realizing the vision of improving India's logistics performance.

The Indian government has made significant strides to promote MMLPs through initiatives like the National Logistics Policy (2022), which encourages the development of such parks across the country. It envisions the creation of a robust multimodal logistics infrastructure, which includes MMLPs, that can drive down the logistics cost as a percentage of GDP. This policy outlines the development of dedicated freight corridors, improved road networks, and the provision of incentives for logistics companies. The government has also identified key locations for MMLPs, such as near industrial corridors and major transport hubs, to ensure strategic placement for maximum efficiency.

6.2 List of Proposed Multi Modal Logistics Park Locations in India

Sr. No.	Location
1.	Delhi-NCR (Delhi, Gurgaon, Ghaziabad, Faridabad, Noida)
2.	Mumbai (Mumbai, Mumbai Suburbs, JNPT, Mumbai Port, Raigad District)
3.	North Gujarat Ahmedabad and Vadodara)
4.	Hyderabad
5.	South Gujarat (Surat and Bharuch)
6.	South Punjab (Ludhiana, Sangrur, Patiala)
7.	North Punjab (Amritsar, Jalandhar, Gurudaspur)
8.	Jaipur
9.	Bangalore

Sr. No.	Location
10.	Pune
11.	Vijayawada
12.	Chennai
13.	Nagpur
14.	Indore
15.	Patna
16.	Kolkata
17.	Ambala
18.	Valsad
19.	Coimbatore
20.	Jagatsinghpur
21.	Nasik
22.	Guwahati
23.	Kota
24.	Panaji
25.	Hisar
26.	Visakhapatnam
27.	Bhopal
28.	Sundargarh
29.	Bhatinda
30.	Solan
31.	Rajkot
32.	Raipur
33.	Jammu
34.	Kandla
35.	Cochin

6.3 MMLP location wise Development Status

Logistics Park Location	Land requirement (acre)	Development Status
Jogighopa	190	Under Construction by NHIDCL
Chennai	184	Awarded
Indore	255	Awarded
Bengaluru	400	Awarded
Nagpur	231	Awarded
Jalna	63	Awarded
Assam	190	Under Construction by NHIDCL
Anantapur	Not Disclosed	Under Bidding
Pune	171	Under Bidding
Patna	Not Disclosed	Planned For Award
Coimbatore	158	Planned For Award
Hyderabad	295	Planned For Award
Jammu	Not Disclosed	Planned For Award
Nashik	Not Disclosed	Under Bidding

6.4 Operational facilities that are currently considered MMLP

MMLP	Road connectivity	Rail connectivity	Sea connectivity
Ardha - Nagpur	NH-361 & Maha Samruddhi Mahamarg (MSMM)	Sindi Railway Station	JNPT
Mappedu - Chennai	SH-50B	Kadambattur Railway Station	Chennai Port
Muddalinganahalli - Bengaluru	NH-648	Muddalinganahalli Railway Station	Mangalore Port, Karwar Port
Machal - Indore	NH-47	Tihi Railway Station, ICD Dhannad	Hazira Port
KRIL Hazira - Surat	NH-53	Surat Railway Station	Hazira Port
Bhiwandi - Mumbai	NH-160, NH-48	Bhiwandi Railway Station	Mumbai Port & JNPT
Hyderabad	DPR in progress	Not specified	Not specified
Coimbatore	DPR in progress	Not specified	Not specified
Pithampur - Indore	NH-47	Tihi Railway Station (development starting)	Hazira Port
Jogighopa - Assam	NH-27	Jogighopa Railway Station	Yet to be awarded

6.5 Benefits of Multi-Modal Logistics Parks (MMLPs) in India

- Reduction in Logistics Costs & Improved Supply Chain Efficiency:** MMLPs integrate multiple transport modes (road, rail, air, sea), optimizing freight movement and reducing transportation expenses. Centralized warehousing, cargo handling, and better connectivity help minimize delays and lower inventory holding costs.
- Decongestion of Urban Areas & Traffic Management:** Relocating logistics hubs outside city limits eases urban traffic congestion, reducing pollution and road wear. Dedicated freight corridors reduce the number of heavy trucks in city centers, improving overall road conditions.
- Boost to Industrial Growth & Employment Generation:** MMLPs create new opportunities in manufacturing, warehousing, and logistics, generating employment in multiple sectors. Improved transportation networks help industries procure raw materials and distribute finished goods more efficiently.
- Sustainable & Environment-Friendly Logistics:** Greater reliance on rail and waterways over road transport leads to reduced fuel consumption and lower carbon emissions. Modernized infrastructure ensures energy-efficient cargo movement, aligning with India's sustainability goals.
- Enhancement of Trade Competitiveness & Investment Potential:** Streamlined logistics reduce costs for businesses, making Indian products more competitive in

domestic and international markets. Improved infrastructure attracts foreign investments in supply chain management, manufacturing, and warehousing.

- **Strengthening Rural Connectivity & Regional Development:** MMLPs improve access to remote areas, supporting trade and economic activities in tier-2 and tier-3 cities. They complement large-scale industrial projects like the Delhi-Mumbai Industrial Corridor (DMIC), promoting balanced regional development.

India's infrastructure is playing a crucial role in the development of Multi-Modal Logistics Parks (MMLPs) by enhancing connectivity and optimizing freight movement. The expansion of industrial corridors, such as the Delhi-Mumbai Industrial Corridor (DMIC), strategically situates MMLPs near major production hubs, boosting supply chain efficiency. Additionally, the National Logistics Policy (2022) promotes digital freight tracking, smart warehousing, and automation, creating a seamless and technologically advanced logistics ecosystem. These developments collectively reduce transit costs, enhance trade competitiveness, and support India's long-term economic growth.

Chapter 7: Commercial EV in India

7.1 Top selling Model in 2024 (passenger vehicles & e-buses are exempted from consideration)

BODY TYPE	MODEL	Approx. Price (INR)	Range (km/charge)
Electric 3-Wheeler	Mahindra Treo Zor	~ INR 3.5 Lakhs	80 km
Electric 3-Wheeler	Tata Ace EV	~ INR 10-11 Lakhs	120 km
Electric 3-Wheeler	Piaggio Ape E City	~ INR 2.5-3 Lakhs	80 km
Electric 3-Wheeler	Mahindra Treo Yaari	~ INR 1.5-2 Lakhs	70 km
Electric 3-Wheeler	Euler HiLoad EV	~ INR 4-4.4 Lakhs	150 km
Electric 3-Wheeler	Omega Seiki Mobility Rage Plus	~ INR 3.5 Lakhs	80 km
Electric Mini Truck	Tata ULTRA T.7 Electric	~ INR 15-16 Lakhs	100 km
Electric Mini Truck	Eicher Pro 2049 Electric	~ INR 19 Lakhs	200 km
Electric Mini Truck	Mahindra E-Supro Cargo Van	~ INR 8-9 Lakhs	100 km
Electric Mini Truck	Tata Ace EV 1000	~ INR 11.5 Lakhs	120 km
CNG Vehicle	Mahindra Bolero Pik-Up CNG	~ INR 8.45 Lakhs	N/A

7.2 List of current commercial EV in India

Body type	Brand	Model	Range (km)	GVW (kgs.)	Payload (kgs.)
Truck	Propel	470 HEV - ROCK 8 X 4	180	60000	43600
Truck	Propel	470 HEV - COAL 8 X 4	180	55000	38600
Truck	Eka Mobility	55T 6x4(heavy-duty hauling)	200	55000	43000
Truck	Eka Mobility	55T 4x2 cargo/delivery trucks	200	55000	43000
Truck	Ashok Leyland	AVTR 55T EV	185	55000	40000
Truck	IPL Tech Electric	Rhino 5536e	185	55000	29500
Tipper	Eicher	Pro 8035XM	162	55000	22800
Truck	Triton	EV Semi LR	800	50000	25000
Truck	Triton	EV Semi SR	480	50000	25000
Truck	Propel	470 MEV - ROCK 6 X 4	350	45000	45000
Tipper	Olectra	Olectra Meghaetron	150	28000	N/A

Body type	Brand	Model	Range (km)	GVW (kgs.)	Payload (kgs.)
Tipper	Tata Motors	Prima E.28k	180	28000	20000
Truck	Ashok leyland	Boss 19T EV	200	19000	18500
Truck	Ashok leyland	Boss 14T EV	230	15050	14000
Truck	Ashok Leyland	Boss 1219	300	11990	6000
Truck	Ashok Leyland	Boss 1218 HB	340	11990	5000
Mini-Truck	Switch Mobility	leV8	250	7200	4000
Pickup	Jupiter	EV Star CC	150	7000	4000
Truck	Eka Mobility	7T Truck	200	6950	3500
Truck	OSM	M1KA 3.0	180	5500	3000
Truck	Eicher	Pro 2055	162	5450	2209
Truck	Eicher	Pro X	N/A	3500	2000
Mini-Truck	Switch Mobility	leV4	120	3490	1700
Truck	OSM	M1KA 1.0	150	2620	1000
Truck	Euler	StormEV LongRange200	200	2600	1250
Truck	Euler	StormEV T1250	100	2600	1250
Mini-Truck	Switch Mobility	leV3	140	2590	1250
Truck	Evage Motors	FR8	100	2550	928
Mini-Truck	Eka Mobility	K1.5 Delivery Van Truck	180	2510	1500
Mini-Truck	Eka Mobility	K1.5 Eutectic Van (Temp. sensitive)	180	2510	1500
Truck	Eka Mobility	2.5T Truck	180	2510	1500
Mini-Truck	Jupiter	Tez (box/Cargo body)	200	2200	1000
Truck	Tata Motors	ACE EV 1000 / 2100	161	2120	1000
Truck	Tata Motors	ACE EV 600 / 2100	155	1840	600
Truck	Mahindra	e-ZEO V1 (Delivery Van)	160	1675	765
Truck	Mahindra	e-ZEO V2 (Flat Side Deck)	160	1675	765
Truck	Tata Motors	Ace Pro EV	155	1610	750
LCV	E-Trio Logistics	E-Trio e LCV	115	950	550

7.3 List of upcoming commercial EV in India

Body type	Brand	Model	Range (km)	GVW (kgs.)	Payload (kgs.)
Truck	I-Board Mobility	Ductor 5525	275	55000	43000
Truck	I-Board Mobility	REX 5525	170	55000	40000
Truck	I-Board Mobility	Long Haulage TT 5520	150	55000	40000
Truck	Tata Motors	Prima E.55 S (Hydrogen)	450	55000	38000
Tipper	I-Board Mobility	Elecy V3525	100	35000	28500
Truck	Tata Motors	Prima H.28 T (Hydrogen)	550	28000	19000
Truck	Eicher	Pro 3015 Fuel Cell (Hydrogen)	400	19000	N/A
Truck	Tata Motors	ULTRA E.12	140	9000	4100
Truck	Tata Motors	Ultra E.9	150	9000	4050
Truck	Tata Motors	Intra EV	230	3320	1750

Chapter 8: Cold Storage in India

8.1 Background

India's cold supply chain infrastructure struggles with inefficiencies in storage, distribution, and transportation, leading to significant post-harvest losses exceeding 15 million metric tons of fruits and vegetables annually. Despite having over 8,653 cold storage facilities with a combined capacity of 39.4 million metric tons, only 60% of this capacity is effectively used. Regional disparities further strain logistics, as most facilities are concentrated in states like Uttar-Pradesh, Gujarat, West Bengal, and Punjab, leaving other regions underserved. Additionally, the country's fleet of 9,000 refrigerated transport vehicles is insufficient to meet the growing demand for perishable goods such as dairy and pharmaceuticals.

To mitigate these challenges, the Indian government has allocated over INR 6,000 crore under initiatives like the Pradhan Mantri Kisan Sampada Yojana (PMKSY) and the Mission for Integrated Development of Horticulture (MIDH) to enhance cold chain infrastructure. The adoption of advanced refrigeration technologies is expanding, with frozen logistics comprising 63% of the market, driven by increasing demand for frozen food and medical supplies. Furthermore, an additional INR 7,000 crore has been earmarked for cold storage expansion to reduce food wastage and improve efficiency. While these measures are steps in the right direction, continued investment and technological upgrades are necessary to fully optimize India's cold chain and strengthen food security.

8.2 State wise Cold Storage Facilities

State	Ongoing project count	Sum of Project cost (INR Crore)
Maharashtra	78	2296
Andhra Pradesh	33	1355
Gujarat	27	1009
Uttar Pradesh	29	810
Tamil Nadu	23	770
Haryana	23	741
Telangana	16	616
Punjab	24	553
Uttarakhand	30	548
Karnataka	17	528
West Bengal	15	415
Himachal Pradesh	17	392
Odisha	9	382
Rajasthan	14	322
Kerala	8	266
Madhya Pradesh	12	257
Bihar	5	131
Jammu & Kashmir	6	79
Nagaland	3	47
Arunachal Pradesh	2	42
Chhattisgarh	2	39

State	Ongoing project count	Sum of Project cost (INR Crore)
Assam	2	38
Mizoram	2	22
Pondicherry	1	19
Manipur	1	18
Andaman & Nicobar	1	5
Grand Total	400	11702

8.3 Metrics for Cold-Storage

Metrics	Warehouse Count	Warehouse Completion Status
Commercial production started	284	71.0%
Under Implementation	56	14.0%
65% progress	28	7.0%
25% progress	22	5.5%
On-going	10	2.5%
Grand Total	400	100.0%

The project shows considerable progress, with 71% of initiatives already in commercial production, marking substantial completion. However, 14% remain under implementation, while 7% have reached 65% progress, and 5.5% are still at 25% progress, indicating slower execution in certain areas. Notably, 2.5% of the projects are categorized as ongoing without specific progress details, suggesting potential delays or extended timelines.

Chapter 9: Conclusion

India's logistics sector is experiencing a major transformation, driven by robust economic growth, progressive policy reforms, and technological integration. This change is evident in the significant expansion of port infrastructure, with both major and non-major ports contributing extensively to cargo handling. The dynamics of cargo handling are evolving across various ports due to infrastructure development, trade policy changes, and commodity-specific shifts. These transformations underscore the nation's commitment to modernizing its logistics capabilities to meet growing demands.

Several key initiatives and infrastructure projects are being implemented to boost logistics efficiency and connectivity. Notable among these are the development of multi-modal logistics parks, integrated manufacturing and logistics clusters, dedicated freight corridors, and inland waterways. The strategic focus on modernizing port facilities, expanding rail freight capacity, and establishing inland container depots is designed to create a comprehensive, well-connected logistics ecosystem capable of supporting India's ambitious economic goals.

The integration of technology is playing an increasingly pivotal role in streamlining logistics operations. Platforms like the Unified Logistics Interface Platform (ULIP) are enhancing digital integration, enabling smoother cargo movement across the supply chain. Additionally, sustainable logistics practices, such as the adoption of electric vehicles, are gaining traction, reflecting the growing importance of environmental considerations within the sector. As India continues to evolve into a major global economy, an efficient and future-ready logistics infrastructure will be essential to sustain economic growth and maintain global trade competitiveness.

A key indicator of progress in the sector is the growing feasibility of achieving the once-ambitious goal of reducing transportation costs to less than 10% of GDP. This shift is particularly evident in industries like cement, where logistics costs have steadily declined from 26% in 2019 to 22% in 2024. RSM Astute Consulting Pvt. Ltd. aims to be a vital data source for its stakeholders, helping them make informed decisions that reduce operating costs. Through these efforts, the organization seeks to add value and contribute to both organizational growth and the nation's economic development.

References

Data references are gathered from various information bureau & agency and are attached as a reference below –

(All the compiled information resources are available in the reports/publications referred from the mentioned domain; we have retrieved relevant information to form a reconcile navigator. More information can be found by visiting the below mentioned links)

Section referred	Information source
Ports	https://shipmin.gov.in
Trans-shipment ports	https://vizhinjampport.in
Ports	https://pib.gov.in
ICD/CFS	https://india-briefing.com/india-dedicated-freight-corridor
Ports	https://pib.gov.in/MinistryOfPorts&Waterways
Railways & corridor	https://www.ibef.org/industry/railways
	https://indianrailways.gov.in
	https://pib.gov.in/MinistryofRailways
	https://railministry.com
	https://www.itln.in/railway
	https://www.logisticsinsider.in/indian-railways
MMLP	https://morth.nic.in
	https://www.pib.gov.in/MMLPDevelopment
Cross reference	https://logistics.gov.in
	https://ieefa.org
	https://pib.gov.in
	https://niti.gov.in
	https://loksabhadocs.nic.in
	https://caq.gov.in
EV	https://www.business-standard.com
	https://pib.gov.in/ElectricCar https://pib.gov.in/PromotionOfElectricVehicles
Cold Storage	https://www.mofpi.gov.in
	https://www.nhb.gov.in

Abbreviations

AFS	Air Freight Stations
ALD-MGS	Allahabad Mughal Sarai
BaaS	Battery as a Service
BPL	Bhopal Junction
BPQ	Balharshah Junction
BZA	Vijayawada Junction
CFS	Container Freight Stations
COPT	Cochin Port Trust
DFC	Dedicated Freight Corridors
DFCCIL	Dedicated Freight Corridor Corporation of India Limited
DGPS	Differential Global Positioning System
DTA	Domestic Tariff Area
EDFC	Eastern Dedicated Freight Corridor
EV	Electric Vehicle
FCI	Food Corporation of India
HDN	High Density Network
HUN	High Utilised Network
ICD	Inland Container Depot
ICTT	International Container Transshipment Terminal
IMLC	Integrated Manufacturing & Logistics Clusters
IWT	Inland Water Transportation
JNPT	Jawaharlal Nehru Port Trust
KSWC	Kerala State Warehousing Corporation
KWH	Kilowatt Hour
MMLP	Multi Modal Logistics Parks
MSC	Mediterranean Shipping Company
MT	Million Tons
MTPA	Metric Tons Per Annum
NGP	Nagpur Junction
NTPC	National thermal
NW	National Waterways
ODC	Over Dimensional Cargo
OHE	Over Head Equipment
RCC	Reinforced Cement Concrete
RORO	Roll On Roll Off
TCO	Total Cost of Ownership
TEU	Twenty-foot Equivalent Unit
VaaS	Vehicle as a Service
WDFC	Western Dedicated Freight Corridor

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Ahmedabad - 380 015

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March 2025

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