Industry Report

Indian Shipping and Logistic Industry

Submitted to

Shreeji Shipping Global Limited

5th August, 2025

Disclaimer

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Contents

Annexure for Abbreviation used.

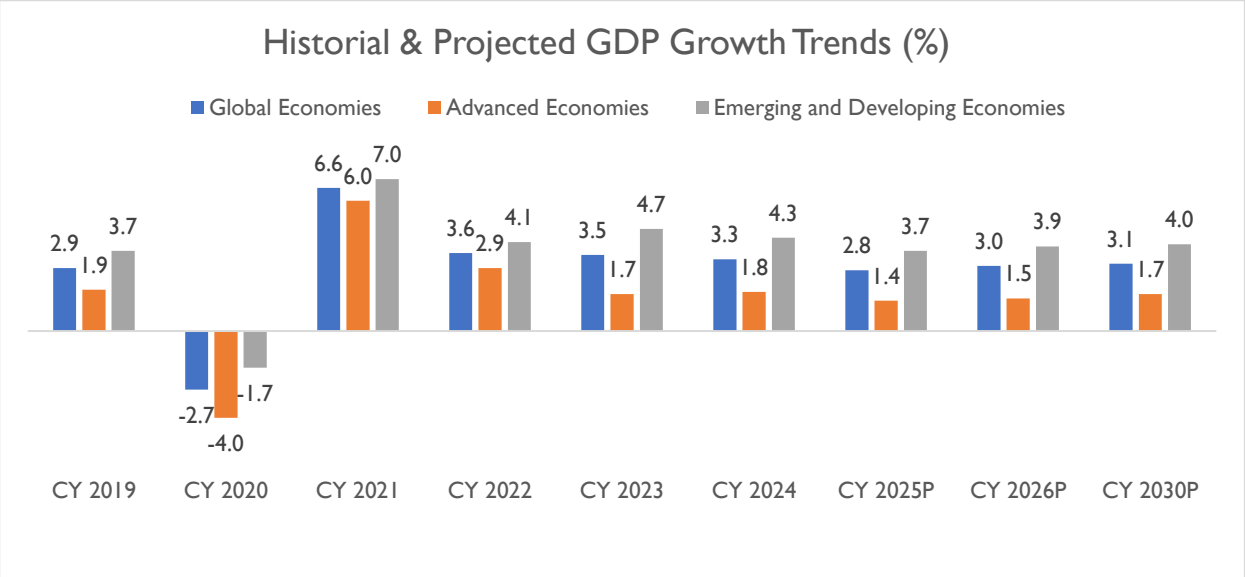
AHTS	Anchor handling tug supply vessel
AI	artificial intelligence
ASEAN	The Association of Southeast Asian Nations
BC	Bulk carriers
BDI	Baltic Dry Index
CAGR	Compound Annual Growth Rate
CCON	Cellular container vessel
CEZ	Coastal Economic Zones
CHT	Chemical tanker
CLAP	Comprehensive Logistics Action Plan
CMIE	The Centre for Monitoring Indian Economy
CPI	Consumer Price Index
CPTPP	Comprehensive and Progressive Agreement for Trans-Pacific Partnership
CY	Calender Year (Jan-Dec)
DRB	Dumb pontoon barge
DRY	Dry cargo liner
ECAR	Ethylene Gas Carrier
EFTA	European Free Trade Association
ELOG	Ease of Logistics
Est., Adv. Est	Estimated, Advance Estimates
EXIM	Export-Import
F&FRM	Fertilizers and Fertilizer Raw Materials
FDI	Foreign Direct Investment
FTA	free trade agreements
FTWZ	Free Trade Warehousing Zone
FY	Fiscal Year/Financial Year (1st April-31st March)
GC	Gas carriers
GDP	Gross Domestic Product
GFCF	Gross fixed capital formation
GHG	Green House Gas
GMB	Gujarat Maritime boards
GST	Goods and Service Tax
GT	Gross Tonnage
GVA	Gross Value Added
GVC	Global Value Chain
IDS	Integration of Digital System
IFSC	International Financial Services Centre
IIP	Index of Industrial Production
IMEC	India-Middle East-Europe Economic Corridor
IMF	International Monetary Fund
INR	Indian Rupee
IoT	IoT
IT	Information Technology
IWAI	Inland Waterways Authority of India
JMVP	Jal Marg Vikas Project
LEEP	Logistics Efficiency Enhancement Program
LNG	Liquefied Natural Gas
LPGT	LPG tanker
LPI	Logistics performance index
MIV	Maritime India Vision
MMT	Million Metric Tonnes

Mn, Bn, Tn, Cr	Million, Billion, Trillion, Crore
M-o-M	Month on Month
MoPSW	The Ministry of Ports, Shipping, and Waterways
MORTH	The Ministry of Road Transport and Highways
MOSPI	The Ministry of Statistics and Programme Implementation
MoU	Memorandum of Understanding
MPSV	Multipurpose Supply Vessels
MSV	Maneuver Support Vessel
NICDC	National Industrial Corridor Development Corporation
NIP	National Infrastructure Pipeline
NLP	National Logistics Policy
NSO	National Statistics Office
OSS	Offshore support vessel
OSV	Offshore Supply Vessels
P, F	Projected, Forecast
PASS	Passenger cum cargo
PFCE	Private Final Consumption Expenditure
PGER	Passenger service
PLI	Production Linked Incentive
POL	Petroleum, Oil, and Lubricants
PPP	Public Private Partnerships
PSV	Platform supply vessel
RBI	Reserve Bank of India
RCEP	Regional Comprehensive Economic Partnership
RoRo	Roll-on/Roll-off
SAARC	The South Asian Association for Regional Cooperation
SCI	The Shipping Corporation of India
SEZ	Special Economic Zone
SIG	System Improvement Group
SMB	State Maritime Boards
SOFF	Specialised Vessels for offshore
SV	Supply vessel
TANC	Oil tanker (crude)
TEPA	Trade and Economic Partnership Agreement
TKm	Tonnes Kilometers
TNAP	Oil tanker (pc)
TUG	Tug
ULIP	Unified Logistics Interface Platform
USD	US Dollar
WPI	Wholesale Price Index
y-o-y	Year on Year

Global Macroeconomic Landscape

Global Economic Overview

The global economy, which recorded GDP growth at 3.3% in CY 2024, is expected to show resilience at 2.8% in CY 2025. This marks the slowest expansion since 2020 and reflects a 0.5%-point downgrade from January 2025 forecast. Moreover, the projection for CY 2026 has also reduced to 3.0%. This slowdown is majorly attributed due to numerous factors such as high inflation in many economies despite central bank effort to curb inflation, continuing energy market volatility driven by geopolitical tensions particularly in Ukraine and Middle East, and the re-election of Donald Trump as US President extended uncertainty around the trade policies as well as overall global economic growth. High inflation and rising borrowing costs affected the private consumption on one hand while fiscal consolidation impacted the government consumption on the other hand. As a result, global GDP growth is estimated to moderation by 2.8% in CY 2025 as compared to 3.3% in CY 2024.



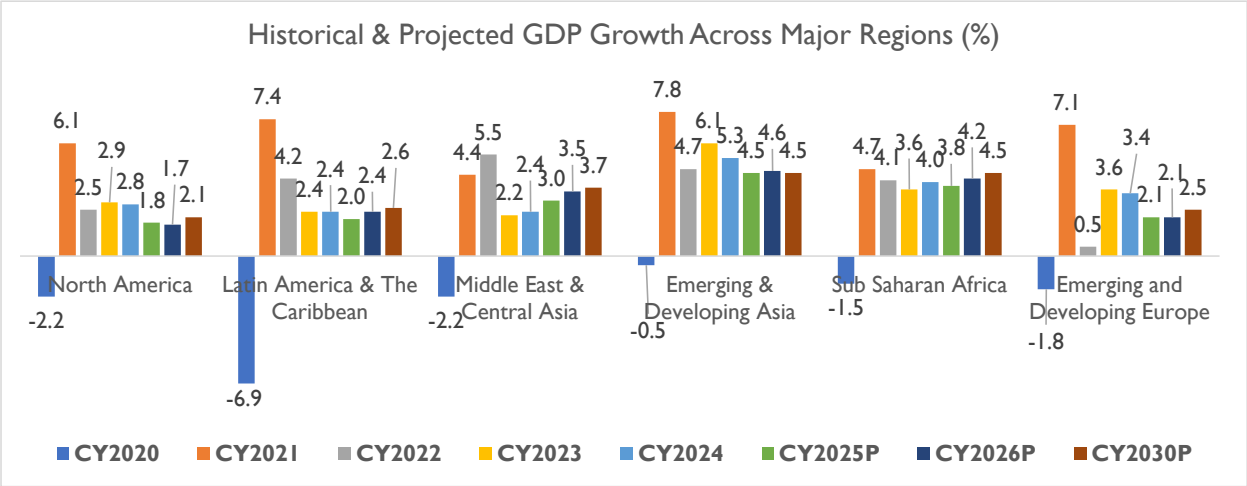
Source – IMF Global GDP Forecast Release April 2025

Note: Advanced Economies and Emerging & Developing Economies are as per the classification of the World Economic Outlook (WEO). This classification is not based on strict criteria, economic or otherwise, and it has evolved over time. It comprises of 40 countries under the Advanced Economies including the G7 (the United States, Japan, Germany, France, Italy, the United Kingdom, and Canada) and selected countries from the Euro Zone (Germany, Italy, France etc.). The group of emerging market and developing economies (156) includes all those that are not classified as Advanced Economies (India, China, Brazil, Malaysia etc.)

Historical and Projected GDP Growth

GDP growth across major regions exhibited a mixed trend between 2022-23, with GDP growth in many regions including North America, Emerging and Developing Asia, and Emerging and Developing Europe slowing further in 2024. In 2025, GDP growth rate in Emerging and Developing Asia (India, China,

Indonesia, Malaysia, etc.) is expected to moderate further to 4.5% from 5.3% in the previous year, while in the North America, it is expected to moderate to 1.8% in CY 2025 from 2.8% in CY 2024.



Source-IMF World Economic Outlook April 2025 update.

Except Middle East & Central Asia, all other regions like Emerging and Developing Asia, Emerging and Developing Europe, Latin America & The Caribbean, Sub Saharan Africa and North America, are expected to record a moderation in GDP growth rate in CY 2025 as compared to CY 2024. Further, growth in the United States is expected to come down at 2.71% in CY 2025 from 2.80% in CY 2024 due to lagged effects of monetary policy tightening, gradual fiscal tightening, and a softening in labour markets slowing aggregate demand.

Global Economic Outlook

The global economy is navigating a period of exceptional uncertainty. Policy shifts, particularly those reshaping trade, have alarmed financial markets and bruised business sentiment. The U.S.'s reciprocal tariffs, which represent additional costs for businesses from almost all countries with which the U.S. trades, charge trade partners an import duty at a discounted rate of approximately half the rate that the trade partner currently imposes on the U.S. According to U.S. President Donald Trump, reciprocal tariffs, ranging from 10% to 50%, are meant to address trade barriers limiting U.S. exports. The *effective* tariff rate includes other tariffs imposed at an earlier date and cumulatively may now be higher than duties charged on U.S. imports. It is unclear whether the reciprocal tariffs represent a negotiating tool, and may therefore be temporary, or form part of broader long-term protectionist measures and industrial strategy.

Responses to reciprocal tariffs have been varied, with some economies promising swift countermeasures. More than 50 markets have sought negotiations with the US. While Malaysia is seeking a united response across ASEAN, the Chinese Mainland has retaliated with duties on all imports from the U.S., declaring it will "fight to the end". In early April, the U.S. confirmed the most aggressive steps yet, with a cumulative

145% tariff on some products imported from the Chinese Mainland. Brazil has readied itself by passing a bill allowing for retaliation, Australia has ruled out retaliatory levies, and the EU remains open to negotiation while preparing a package of countermeasures.

Tariffs and their unpredictable application have weighed on consumer and business sentiment, sunk global stock markets, raised recession risks, and made a global slowdown more likely. Our latest Global Business Optimism Insights report for indicates a further decline in business optimism as firms continue to grapple with trade-related policy uncertainty and its broader economic implications. Export-driven sectors reported sharp declines in optimism. Financial risk perceptions remain elevated as businesses contend with high borrowing costs and persistent inflation expectations. More broadly, the uncertainty is reflected in delayed capital expenditure and a pullback in hiring.

Tariffs have begun to exert pressure on central banks by contributing to inflationary pressures and increasing financial market volatility. Central banks are adjusting forward guidance and policy frameworks and may begin to consider the likelihood of softer growth being a bigger priority than high inflation by starting to cut interest rates to support economies. For businesses, this uncertainty translates into unpredictable cost structures, fluctuating credit availability, and the management of operational costs through diversified supply networks.

The latest Dun & Bradstreet Global Business Optimism Insights report reveals a further decline in business optimism, though at a more moderate pace than in the prior quarter, as businesses continued to grapple with trade-related policy uncertainty and its broader economic implications. Export-driven sectors such as automotives, electricals, and metals saw sharp declines in optimism, particularly in the U.S., Mexico, South Korea, and Japan, where rising tariffs and shifting trade policies have fueled cost pressures and demand volatility. Financial risk perceptions remain elevated.

Global Growth Projection

At broader level, the global economy is expected to experience a slowdown in 2025, with GDP growth projected to decline to 2.8%, down from 3.3% in 2024. This deceleration reflects persistent inflationary pressure, geopolitical uncertainties and tightened monetary policies. However, a sightly recovery is anticipated in 2026, with growth projected to improve to 3.0%. Global inflation is expected to decline steadily, to 4.3% in 2025 and to 3.6% in 2026. Inflation is projected to converge back to the target earlier in advanced economies, reaching 2.2% in 2026, whereas in emerging market and developing economies, it is anticipated to decrease to 4. 6% during the same period. Trade tariffs function as a supply shock for the countries imposing them, leading to a decrease in productivity and an increase in unit costs. Countries subject to tariffs experience a negative demand shock as export demand declines, placing downward

pressure on prices. In each scenario, trade uncertainty introduces an additional layer of demand shock since businesses and households react by delaying investment and spending, and this impact could be intensified by stricter financial conditions and heightened exchange rate volatility. Moreover, Global trade growth is expected to slow down in 2025 to 1.7%. This forecast reflects increased tariff restrictions affecting trade flows and, to a lesser extent, the waning effects of cyclical factors that have underpinned the recent rise in goods trade. Geopolitical tensions as seen in the past such as the wars in Ukraine and the Middle East could exacerbate inflation volatility, particularly in energy and agricultural commodities.

India Macroeconomic Analysis

India emerged as one of the fastest growth economies amongst the leading advanced economies and emerging economies. In CY 2024, even amidst geopolitical uncertainties, particularly those affecting global energy and commodity markets, India continues to remain one of the fastest growing economies in the world and is expected to grow by 6.2% in CY 2025 and 6.3% in 2026.

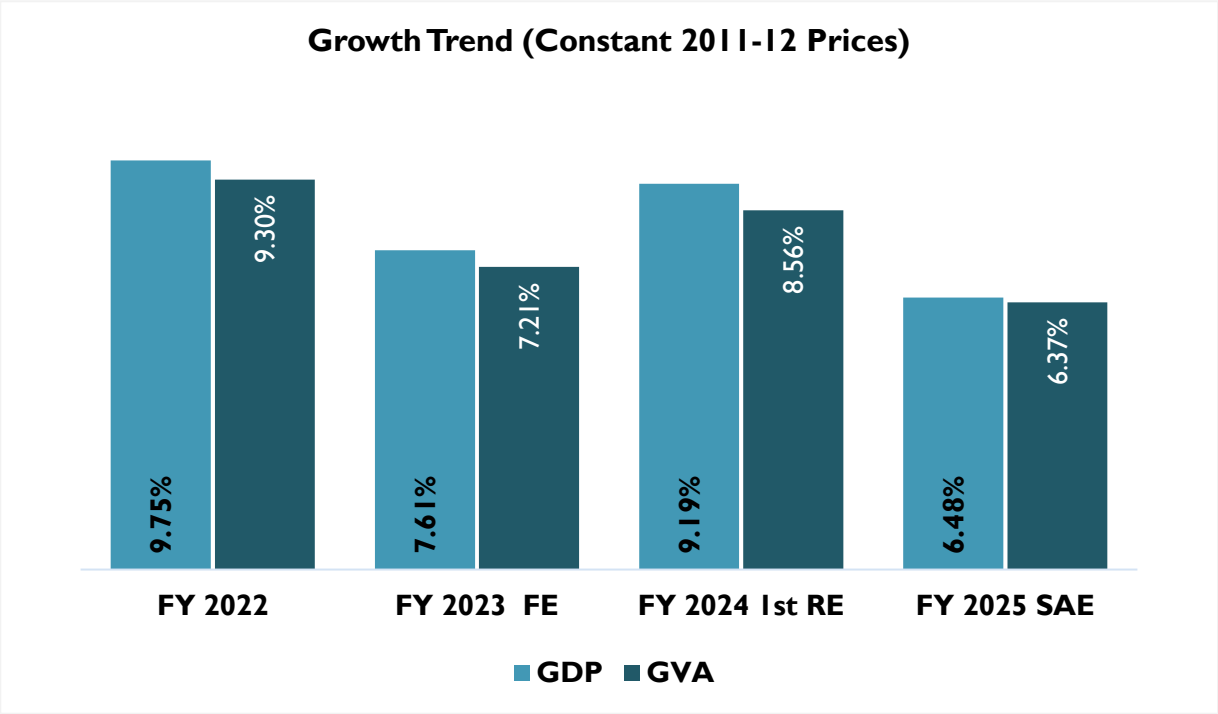
Country	CY 2020	CY 2021	CY 2022	CY 2023	CY 2024	CY 2025	CY 2026 P	CY 2030 P
India	–5.8%	9.7%	7.6%	9.2%	6.5%	6.2%	6.3%	6.5%
China	2.3%	8.6%	3.1%	5.4%	5.0%	4.0%	4.0%	3.4%
United States	-2.2%	6.1%	2.5%	2.9%	2.8%	1.8%	1.7%	2.1%
Japan	-4.2%	2.7%	0.9%	1.5%	0.1%	0.6%	0.6%	0.5%
United Kingdom	-10.3%	8.6%	4.8%	0.4%	1.1%	1.1%	1.4%	1.4%
Russia	-2.7%	5.9%	-1.4%	4.1%	4.1%	1.5%	0.9%	1.2%

Source: World Economic Outlook, April 2025

The Government stepped spending on infrastructure projects to boost the economic growth had a positive impact on economic growth. The capital expenditure of the central government increased by average 26.52% during FY 2023-FY 2024 which slowed to 7.27% in FY 2025 which is expected to translate in moderating GDP growth of 6.5% in 2024. In the Union Budget 2025-2026, the government announced INR 11.21 billion capex on infrastructure (10.12% higher than previous year revised estimates) coupled with INR 1.5 trillion in interest-free loans to states. This has provided much-needed confidence to the private sector, and in turn, expected to attract the private investment.

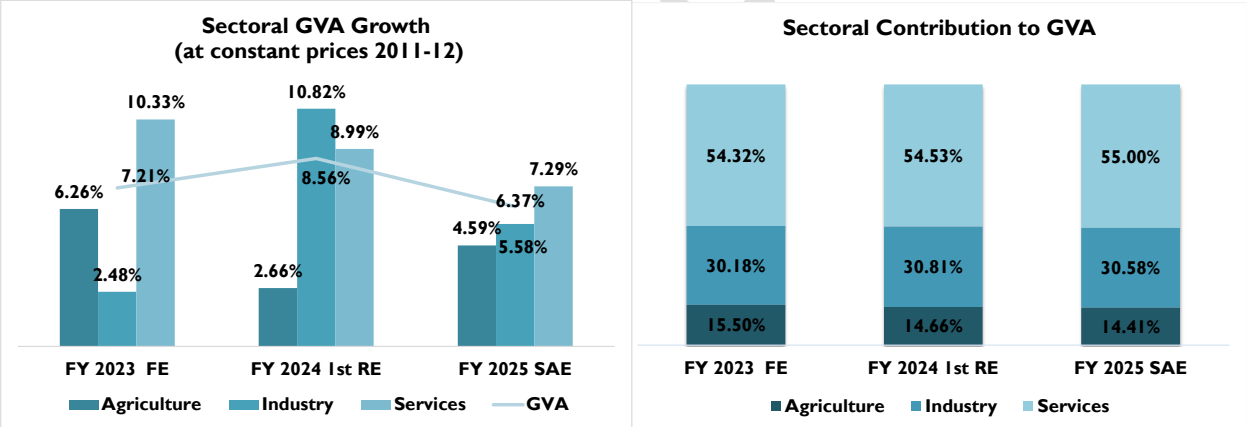
Historical GDP and GVA Growth trend

As per the latest estimates, India's GDP at constant prices is estimated to grow to INR 187.95 trillion in FY 2025 (Second Revised Estimates) with the real GDP growth rates estimated to be 6.48% for FY 2025. Similarly, real Gross Value Added (GVA) growth stood is estimated to have moderated to 6.37% in FY 2025. Even amidst global economic uncertainties, India's economy exhibited resilience supported by robust consumption and government spending.



Source: Ministry of Statistics & Programme Implementation (MOSPI), National Account Statistics: FY2025.
FE is Final Estimates, RE is Revised Estimate and SAE is Second Revised Estimates

Sectoral Contribution to GVA and annual growth trend



Source: Ministry of Statistics & Programme Implementation (MOSPI)
FE is Final Estimates, RE is Revised Estimate and SAE is Second Revised Estimates

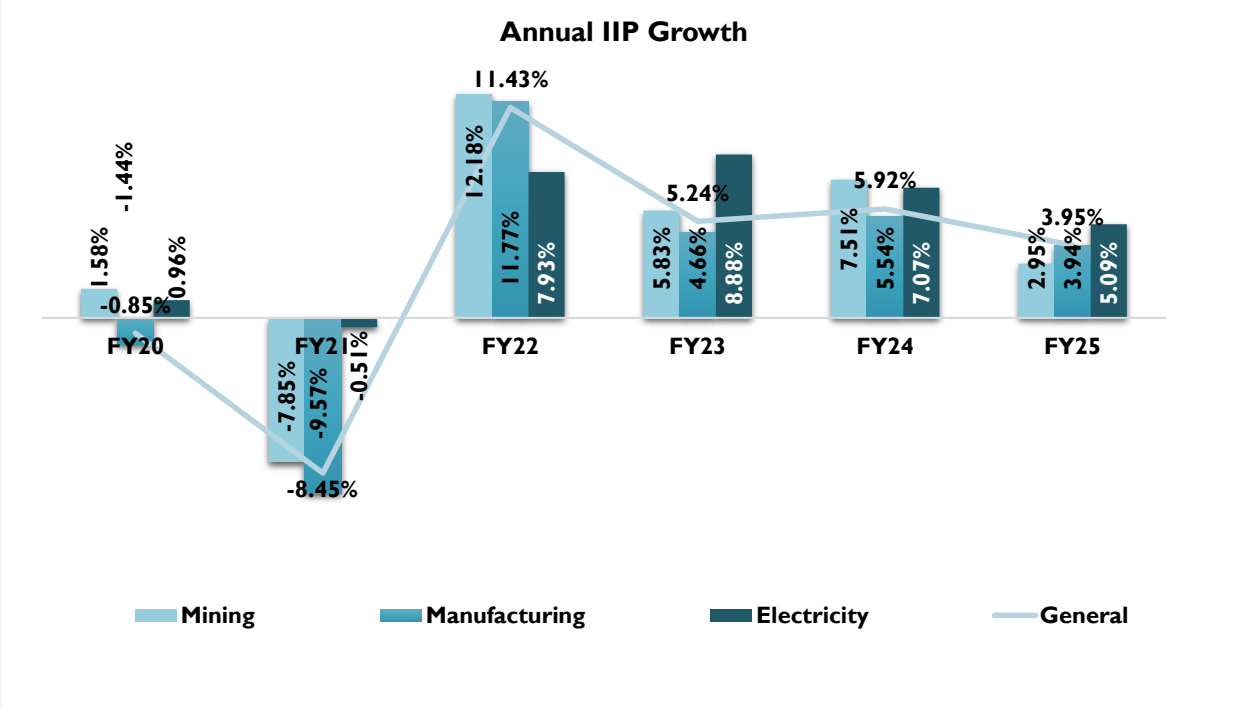
Sectoral analysis of GVA reveals that the industrial sector experienced a moderation in FY 2025, recording a 5.58% y-o-y growth against 10.82% year-on-year growth in FY 2024. Within the industrial sector, growth moderated across sub sector with mining, manufacturing, and construction activities growing by 2.76%, 4.29%, and 8.64% respectively in FY 2025, compared to 3.21%, 12.30%, and 10.41% in FY 2024. Growth in the utilities sector too moderated to 6.03% in FY 2025 from 8.64% in the previous year. The industrial sector's contribution to GVA moderated marginally from 30.81% in FY 2024 to 30.58% in FY 2025.

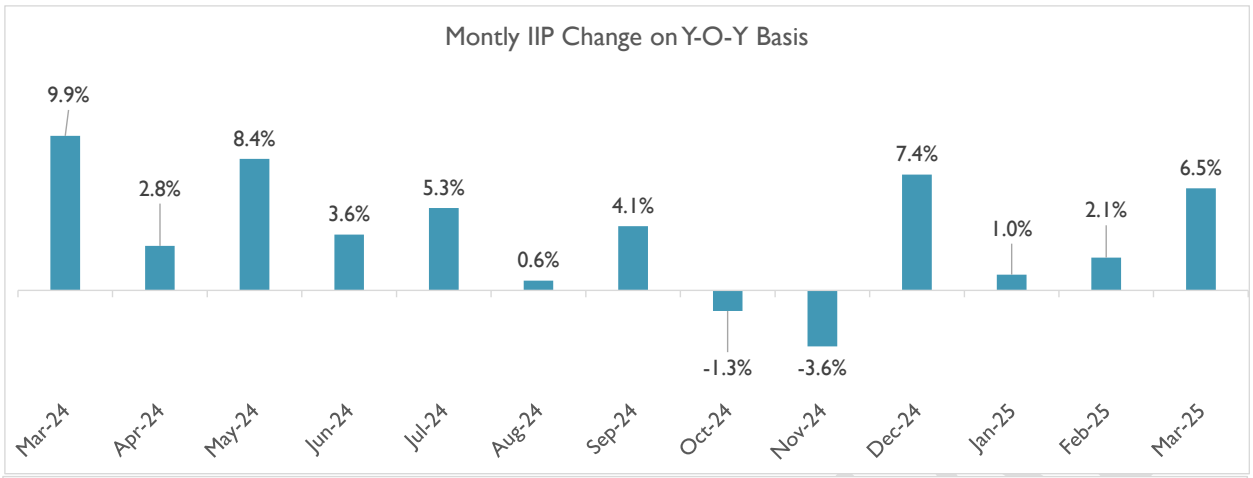
The services sector continued to be the main driver of economic growth, although its pace moderated. It expanded by 7.29% in FY 2025 from 8.99% in FY 2024. The services sector retained its position as the largest contributor to GVA, rising from 54.32% in FY 2023 to 54.53% in FY 2024, with a further increase to 55.00% in FY 2025.

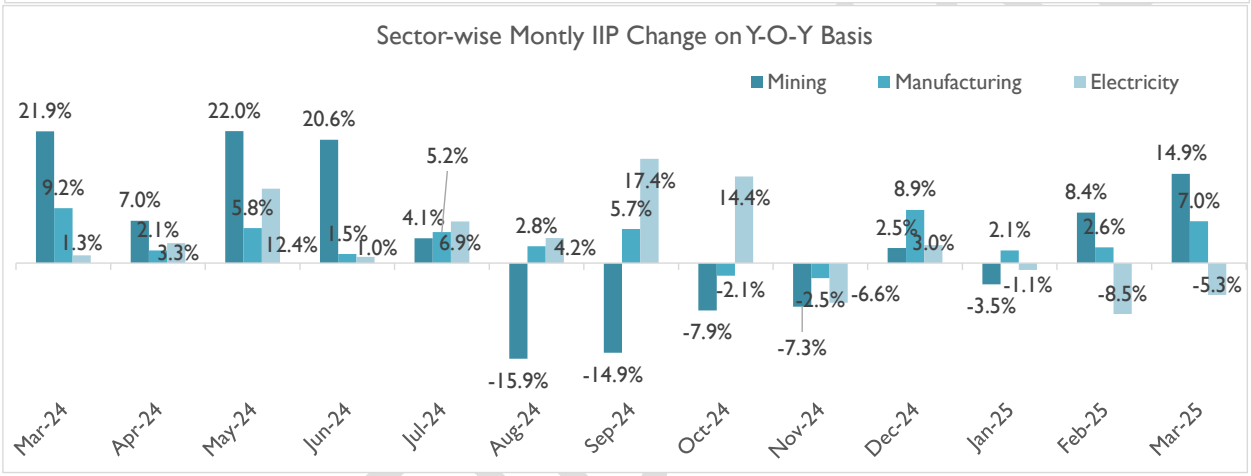
The agriculture sector saw an acceleration, with growth increasing from 2.66% in FY 2024 to 4.59% in FY 2025. However, its contribution to GVA declined marginally from 14.66% in FY 2024 to 14.41% in FY 2025. Overall, Gross Value Added (GVA) growth moderated to 6.37% in FY 2025 from 8.56% in FY 2024

Annual & Monthly IIP Growth

Industrial sector performance as measured by IIP index exhibited moderation in FY 2025, recording a 3.95% y-o-y growth against 5.92% increase in the previous year. The manufacturing index showed moderation and grew by 3.94% in FY 2025 against 5.54% in FY 2024. Mining sector index too moderated and exhibited a growth of 2.95% in FY 2025 against 7.51% in the previous years while the Electricity sector Index, also witnessed moderation of 5.09% in FY 2024 against 7.07% in the previous year.





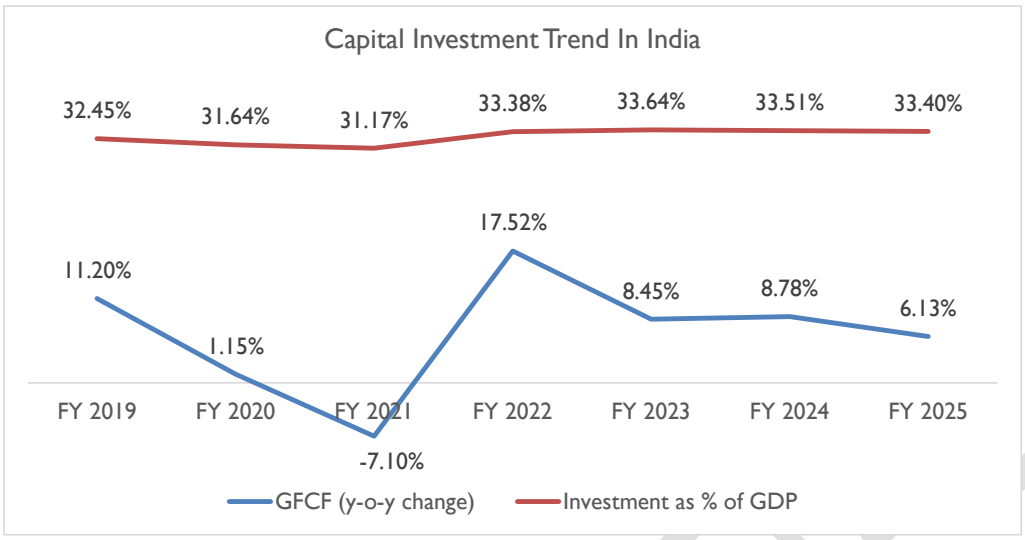


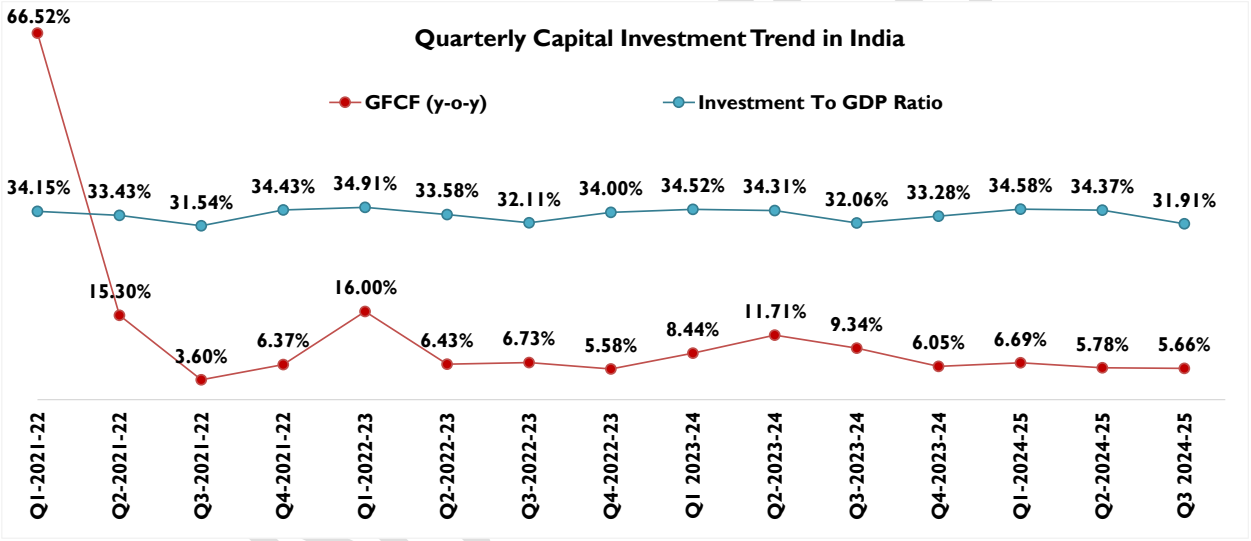
Source: Ministry of Statistics & Programme Implementation (MOSPI)

Overall month IIP index growth grew by 6.5% in March 2025 against 2.1% growth in the February 2025. Both manufacturing and mining index witnessed an improvement in March 2025 over the previous month as well as against January 2025 while electricity Index improved considerably but remained in negative growth trajectory.

Annual and Quarterly: Investment & Consumption Scenario

Other major indicators such as Gross fixed capital formation (GFCF), a measure of investments, has shown fluctuation during FY 2025 as it registered 6.13% year-on-year growth against 8.78% yearly growth in FY 2024, taking the GFCF to GDP ratio measured to 33.40%.

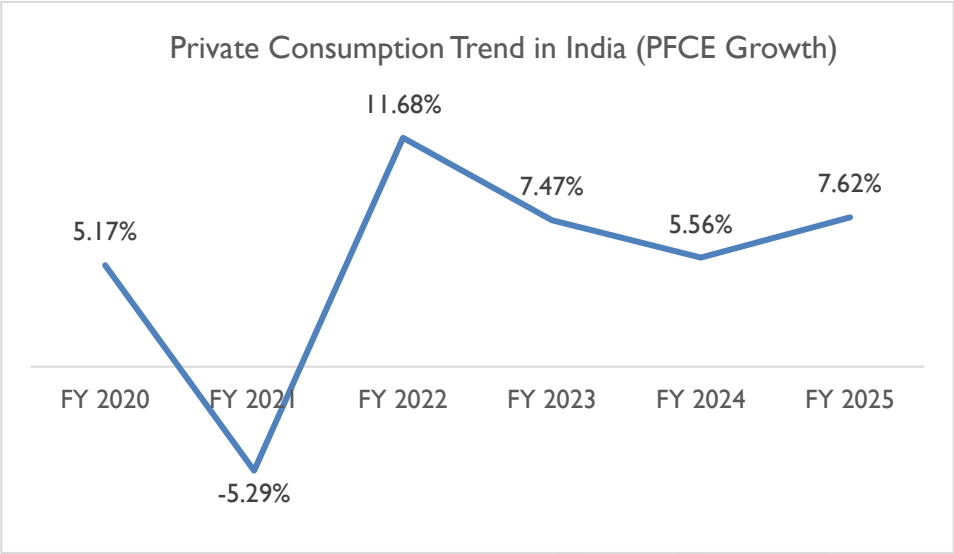


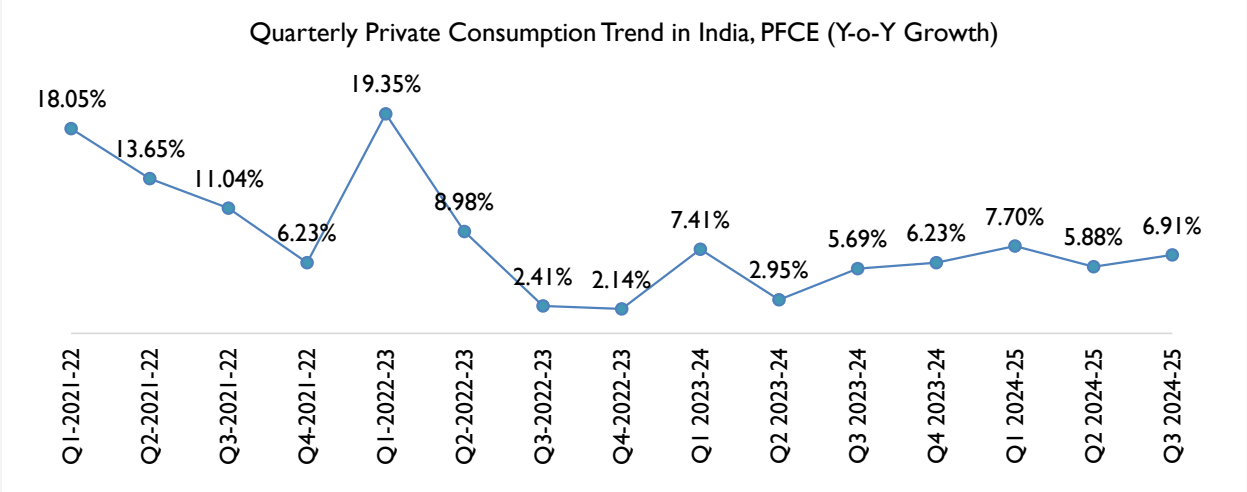


Source: Ministry of Statistics & Programme Implementation (MOSPI)

On quarterly basis, GFCF exhibited a fluctuating trend in quarterly growth over the previous year same quarter. In FY 2024, the growth rate moderated to 6.05% in March quarter against the previous two quarter as government went slow on capital spending amidst the 2024 general election while it observed an improvement in Q1 FY 2025 by growing at 6.69% against 6.05% in the previous quarter and moderated in the subsequent two quarter. On yearly basis, the growth rate remained lower compared to the same quarter in the previous year during FY 2025. The GFCF to GDP ratio measured 31.91% in Q3 FY 2025.

Private Consumption Scenario





Sources: MOSPI

Private Final Expenditure (PFCE) a realistic proxy to gauge household spending, observed growth in FY 2025 as compared to FY 2024. However, quarterly data indicated some improvement in the current fiscal as the growth rate improved over the corresponding period in the last fiscal.

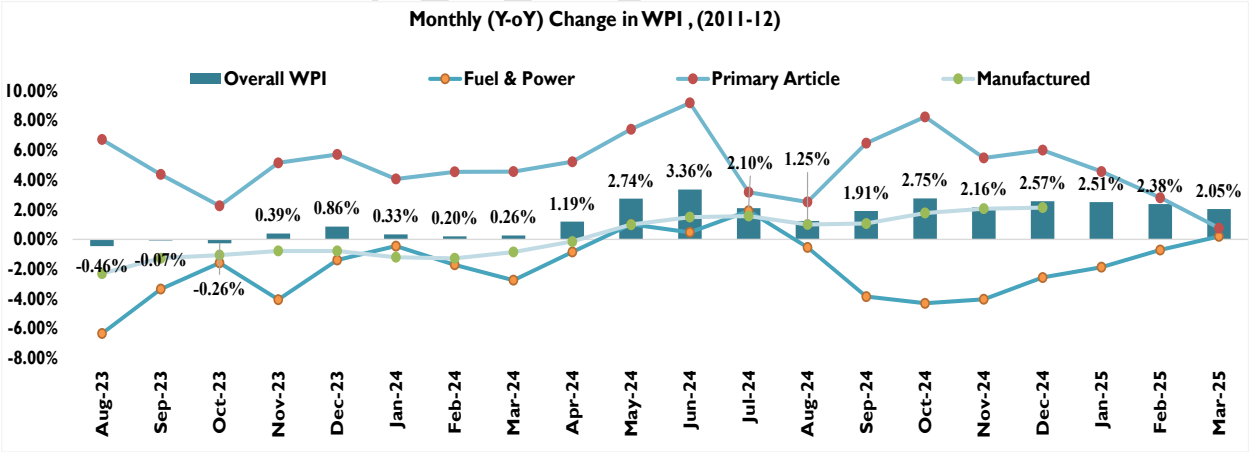
Inflation Scenario

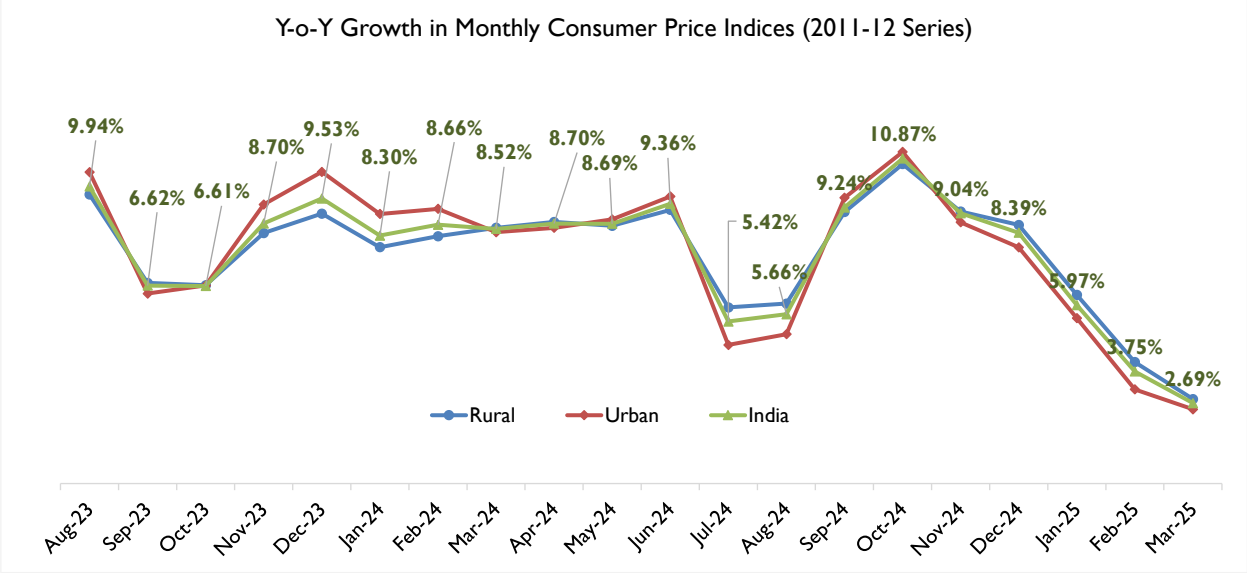
The inflation rate based on India's Wholesale Price Index (WPI) exhibited significant fluctuations across different sectors from August 2023 to March 2025. The annual rate of inflation based on all India Wholesale Price Index (WPI) number is 2.05% (provisional) for the month of March 2025 (over March 2024). Positive rate of inflation in March 2025 is primarily due to increase in prices of manufacture of food products, other manufacturing, food articles, electricity and manufacture of textiles etc.

By March 2025, Primary Articles (Weight 22.62%), The index for this major group decreased by 1.07% to 184.6 (provisional) in March 2025 from 186.6 (provisional) for the month of February 2025. Price of crude petroleum & natural gas (-2.42%), non-food articles (-2.40%) and food articles (-0.72%) decreased in March 2025 as compared to February 2025. The price of minerals (0.31%) increased in March 2025 as compared to February 2025.

Moreover, power & fuel, the index for this this major group decreased by 0.91% to 152.4 (provisional) in March 2025 from 153.8 (provisional) for the month of February 2025. Price of electricity (-2.31%) and mineral oils (-0.70%) decreased in March 2025 as compared to February 2025. The price of coal remained same as in the previous month.

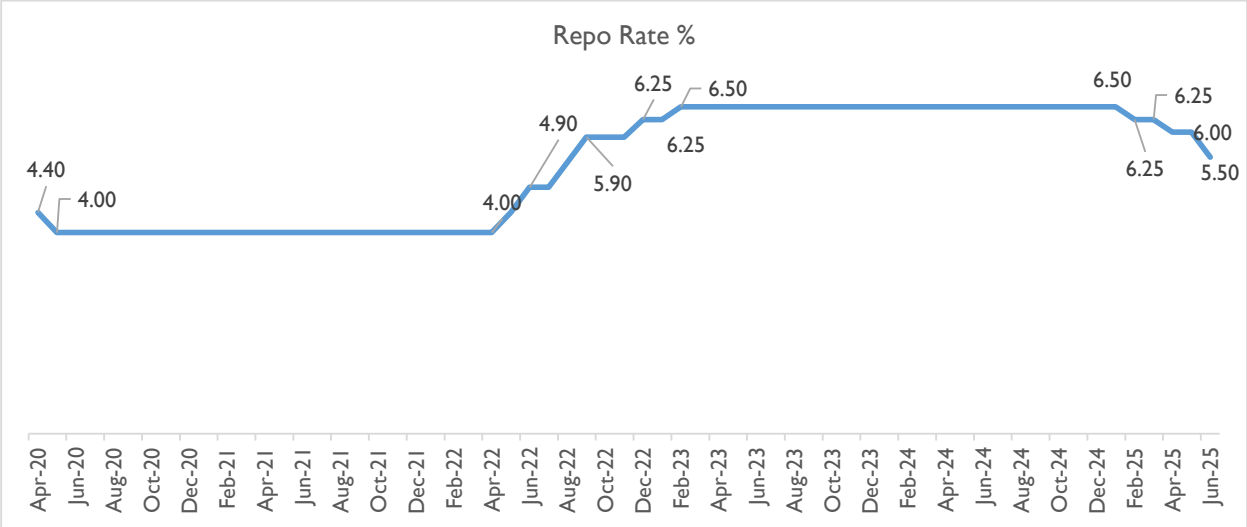
Furthermore, Manufactured Products (Weight 64.23%), the index for this major group increased by 0.42% to 144.4 (Provisional) in March 2025 from 143.8 (Provisional) for the month of February 2025. Out of the 22 NIC two-digit groups for manufactured products, 16 groups witnessed an increase in prices, 5 groups witnessed a decrease in prices and 1 group witnessed no change in prices. Some of the important groups that showed month-over-month increase in prices were manufacture of basic metals; food products; other transport equipment; other manufacturing and machinery and equipment etc. Some of the groups that witnessed a decrease in prices were manufacture of textiles; chemicals and chemical products; computer, electronic and optical products; printing and reproduction of recorded media and furniture etc in March 2025 as compared to February 2025.





Source: MOSPI, Office of Economic Advisor

Retail inflation rate (as measured by the Consumer Price Index) in India showed notable fluctuations between August 2023 and March 2025. Overall, the national CPI inflation rate moderated to 2.69% by March 2025, indicating a gradual easing of inflationary pressures across both rural and urban areas. Rural CPI inflation peaked at 9.67% in August 2023, declining to 2.82 % in March 2025. Urban CPI inflation followed a similar trend, rising to 10.42% in August 2023 and then dropping to 2.48% in March 2025. CPI measured above 6.00% tolerance limit of the central bank since July 2023. As a part of an anti-inflationary measure, the RBI has hiked the repo rate by 250 bps since May 2022 and 8 Feb 2023 while it held the rate steady at 6.50 % till January 2025. On 6th June 2025, RBI reduced the repo rate by 50 basis points which currently stands at 5.50%.



Sources: CMIE Economic Outlook

Growth Outlook

The Union Budget 2025-26 has laid the foundation for sustained growth by balancing demand stimulation, investment promotion and inclusive development. Inflation level is reaching within the central bank's target; the RBI may pursue further monetary easing that will support growth. The medium-term outlook is bright, fueled by the emphasis on physical and digital infrastructure spending. With a focus on stimulating demand, driving investment and ensuring inclusive development, the budget introduces measures such as tax relief, increased infrastructure spending and incentives for manufacturing and clean energy. These initiatives aim to accelerate growth while maintaining fiscal discipline, reinforcing India’s long-term economic resilience. The expansion of tax relief i.e zero tax liability for individuals earning up to INR 12 lacs annually under the new tax regime is expected to strengthen household finances and, consequently, boost consumption.

The external sector remains resilient, and key external vulnerability indicators continue to improve. However, tariff-related uncertainty is likely to weigh on exports and investment, prompting us to cut our FY26 GDP growth forecast to 6.3%.

Overview of Logistics Industry

Logistic industry is a backbone of the economy, providing efficient and cost-effective transportation of good from the point of origin to that of consumption and a critical component to support economic growth. The sector provides livelihood to over 22 million people and improving the sector would have a cascading effect on the country's exports growth. Growth in volume of freight movement from major manufacturing segments such as cements, metals, retail, auto, textiles, pharma, and consumer goods, determine growth of logistics services.

Logistics services are broadly categorized into two segments:

a) **Inbound Logistics services** include purchasing and movement of materials, parts, and finished inventory to manufacturing and assembly plants, retail stores and warehouses.

b) **Outbound Logistics** services include storage and movement of finished products from end of production line to the end user for final consumption.

Traditionally, purview of logistics services meant inclusion of transportation only. However, with increased global trade and movement of goods across the world, it has evolved to integrate several functions in to one. These include fleet logistic operation, storage, and warehousing (CWC, SWC, CFD, IFS, Logistics parks), and other value-added services like Packaging, Labelling, and assembling; Express Service; Tracking and tracing, amongst other. However, transportation accounts for a major part of logistics services.

International Trade:

Increasing globalization has resulted in increasing trade flows across the globe including India. Globally, world exports have increased at 5% while import have increased at 5.1%.

Source: World Trade Organization

Share in World Export	2017	2018	2019	2020	2021	2022	2023
US	8.7%	8.5%	8.6%	8.1%	7.9%	8.3%	8.5%
China	12.8%	12.7%	13.1%	14.7%	14.9%	14.2%	14.2%
UK	2.5%	2.5%	2.4%	2.3%	2.1%	2.1%	2.2%
India	1.7%	1.7%	1.7%	1.6%	1.8%	1.8%	1.8%

Share in World Import	2017	2018	2019	2020	2021	2022	2023
US	13.4%	13.2%	13.3%	13.5%	13.0%	13.1%	13.1%
China	10.3%	10.8%	10.8%	11.6%	11.9%	10.5%	10.5%
UK	3.6%	3.4%	3.6%	3.6%	3.1%	3.2%	3.3%
India	2.5%	2.6%	2.5%	2.1%	2.5%	2.8%	2.8%

Source: World Trade Organization

Over the years, India's presence in international trade has increased as indicated in the above table supporting the higher demand for logistic transports.

Overview of Indian Logistic Industry

India's logistics sector, one of the largest globally, is vital to the nation's economic growth. It links various economic elements and encompasses transportation, warehousing, and other supply chain solutions ranging from the suppliers to the end-customers. Established in July 2017, the Department of Commerce's logistics division, led by the Special Secretary to the Government of India, oversees the sector's integrated development. The division focuses on policy reforms, process enhancements, and technological adoption to address sector challenges.

India's logistics industry has experienced a transformative journey, fueled by the liberalization of the economy in the 1990s, which opened doors to increased international trade and foreign investments. With a vast coastline, well-developed ports, and a strategic location, India has become an attractive destination for optimizing global supply chain networks.

Indian Government initiatives like the Goods and Services Tax (GST) and the Dedicated Freight Corridor (DFC) project have significantly enhanced logistics efficiency by reducing tax complexities and improving connectivity. The DFC aims to improve rail freight operations by reducing transit time, while GST has simplified the inter-state movement of goods.

India's young and large workforce, with over 1.3 billion people, presents a strong advantage for the logistics sector. The country's demographic profile ensures a steady supply of skilled labor, essential for managing the complexities of modern supply chain operations. Furthermore, India's strategic location at the

crossroads of major trade routes between Asia, Europe, and Africa enhances its role as a global logistics hub, ensuring efficient transportation and connectivity.

Transport Sector in India is a very extensive system comprising different modes of transport like roads, railways, aviation, inland waterways, shipping, and pipeline that facilitates easy and efficient movement of freight/cargo movement across the country. Transportation of goods takes place through various modes such as roadways, railways, waterways, airways. Freight movement in India is predominantly reliant on road transportation, accounting for 59% of goods moved in ton-kilometers, followed by rail (35%), waterways (6%), and air (1%). Despite this, mode-based disparities in freight transportation remain a challenge, though efforts to address these disparities are underway, such as upgrading infrastructure and embracing digitalization. A major focus is on creating a more sustainable logistics ecosystem, with investments in eco-friendly solutions and green technologies.

Multimodal Transport

Multimodal transport is the movement of good from point A to point B using different modes of transport such as roadways, railways, waterways, and airways, by a single service provider. In a large and diverse country like India, end-to-end delivery is a humongous task, and hence multimodal transport is an effective solution. Road transport is by far the most used mode, with railways now expanding their bouquet of service offerings. Air freight is expensive, while inland waterways are at a very nascent stage. Port led cargo movement is skewed heavily towards the west coast, due to the presence of natural harbors and economic weight of Maharashtra and Gujarat. For various companies, multimodal transport can mean different solutions depending on their portfolio of transport and storage options.

Rail and waterways: Historically, suitable for long distance haul of large, regular flows of low value density goods between fixed origin/destination points with less fragmentation. Modern intermodal services are increasing the ability of these modes to compete with trucks for low-medium value shipments.

Indian Railways operates one of the largest rail networks in the world, spanning around 67,000 kilometers. The rail transport sector has seen growth through the development of Dedicated Freight Corridors (DFCs), modernization of rail infrastructure, and increased investment in rolling stock. Nevertheless, the sector faces challenges including infrastructure bottlenecks, outdated technology, and competition from road transport.

Sea Transport: India's maritime infrastructure comprises 12 major ports and 217 non-major ports along its 7,516.6-kilometer coastline. Among the non-major ports, 78 are operational and handle cargo. The sector's growth is driven by the expansion of port capacities, increased containerization, and initiatives such as Sagarmala, which focuses on port-led development. However, challenges such as port congestion, inadequate hinterland connectivity, and bureaucratic delays persist.

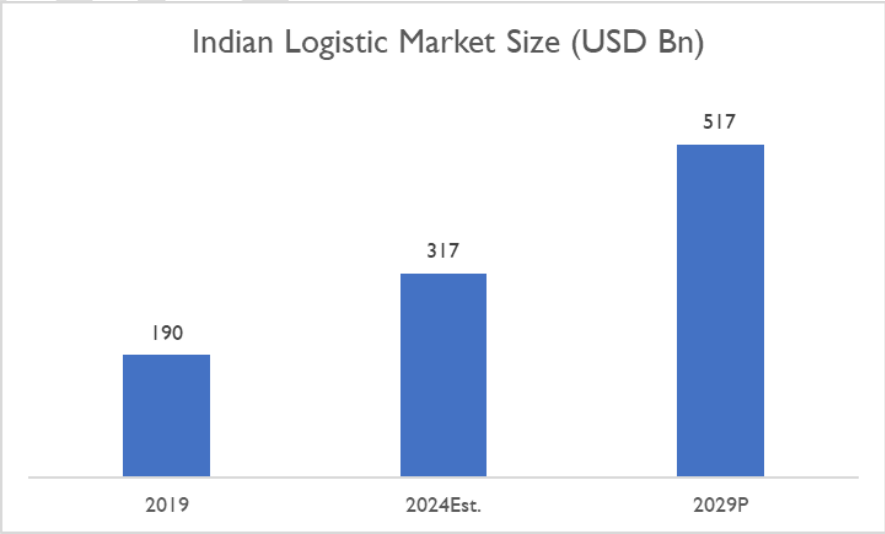
Road: Offers greater flexibility in terms of destination and volume of goods to be transported but has higher per tonne-mile cost as compared to rail or water. India boasts an extensive road network of over 6.67 million kilometers, making it the second largest in the world. The growth of road transport is primarily driven by increased manufacturing activities, a booming e-commerce sector, and government initiatives such as Bharatmala Pariyojana, which aim to improve road connectivity. However, the sector faces challenges such as poor road quality in rural areas, traffic congestion, and high logistics costs.

Air: Suitable for goods with very short turn-around time but is has very high cost and pollution intensity. The air transport sector in India has seen rapid expansion, with significant hubs in cities such as Mumbai, Delhi, and Bangalore. This growth is fueled by the transportation of high-value and perishable goods, increased air connectivity, and liberalized aviation policies. Despite these advancements, the sector grapples with high costs, limited cargo capacity, and regulatory hurdles.

Pipeline: Suitable for liquids and gases and any stable chemicals (e.g. water, oil, natural gas, biofuels etc.) Due to significant economies of scale which create low variable costs and intrinsically higher energy efficiencies, modes such as rail, water, and pipeline, offer the potential to move goods much more cost-effectively than trucks and with far lower energy consumption and CO2 emissions. Cost of freight movement by road is INR 3.6/ton–km as compared to INR 1.6/ton–km for rail, INR18/ton-kms by air (5 times of road transport) and INR 2/ton–km for both waterways and pipeline.

Market Size Growth

India's logistics industry is a vital component of the country's economic growth, poised to achieve significant milestones in 2024 due to a surge in e-commerce, government initiatives, and technological advancements. As the Indian economy expands, the logistics sector is expected to see unprecedented growth, driven by a range of factors including enhanced infrastructure and evolving market demands.



Source: D&B Desk Research

The boom in e-commerce has led to increased demand for efficient logistics solutions, particularly in last-mile delivery and rural expansion. This trend opens substantial investment opportunities in warehousing, transportation, and technology-driven solutions. Government initiatives and major infrastructure projects such as Bharatmala and Sabarimala, aim to streamline operations and improve connectivity. Technological advancements, including IoT, AI, blockchain, and automation technologies such as drones and driverless vehicles, are revolutionizing logistics operations by enhancing efficiency and reducing costs. India's logistics market is estimated to have valued at USD 317 Bn in 2024. The sector contributes 5% to India's GDP and employs approximately 22 Mn people, underscoring its significant role in the national economy.

India's Logistics performance index (LPI)

The country successfully ascended from the 44th to the 38th position in the World Bank's Logistics Performance Index (LPI) 2023, demonstrating notable progress. Logistic cost in India currently stands between 7.8-8.9% of GDP, [1] intriguingly closer to a level seen in developed nations.

Parameter	Rank 2023 (Out Of 139 Countries)	Rank 2018 (Out Of 160 Countries)	Rank 2016 (Out Of 160 Countries)
Overall LPI Rank	**38**	**44**	**35**
Custom	47	40	38
Infrastructure	47	52	36
International Shipments	**22**	**44**	**39**
Logistics Quality & competence	38	42	32
Tracking & tracing	41	38	33
Timeliness	35	52	42

Source: World Bank

Countries	Overall LPI Rank in 2010	Overall LPI Rank in 2023	International Shipment Group Rank in 2010	International Shipment Group Rank in 2023
India	47	38	47	22
USA	15	17	7	26
China	27	19	30	14
UK	8	19	16	22

Source: World Bank

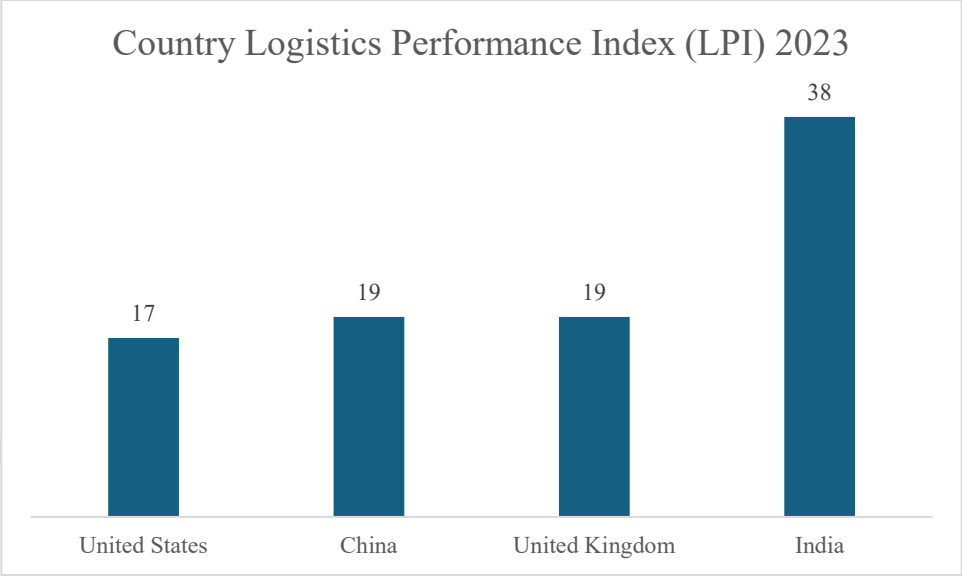
Globally, India and China have made significant strides in logistics performance and international shipping capabilities over the years in comparison to other developed countries such as US and UK. India's Logistics Performance Index (LPI) rank improved from 47 in 2010 to 38 in 2023, and its rank in the International

[1] National Council of Applied Economic Research (NCAER) estimates in 2021-22.

Shipment Group rose from 47 to 22 by 2024. This progress highlights enhanced infrastructure and increased competitiveness in global trade. Similarly, China improved its LPI rank from 27 in 2010 to 19 in 2023, while its International Shipment Group rank advanced from 30 to 14 by 2024. This reflects China's dominance in global logistics, driven by substantial investments.

In contrast, both the USA and the UK have seen declines in performance. The USA's overall LPI rank fell from 15 in 2010 to 17 in 2023, and its International Shipment Group rank dropped from 7 to 26, indicating stagnation and rising competition. The UK's overall LPI rank also decreased, from 8 to 19, and its International Shipment Group rank declined from 16 to 22, likely influenced by challenges such as Brexit. This data underscores the shifting dynamics of global logistics, with emerging economies outpacing developed nations.

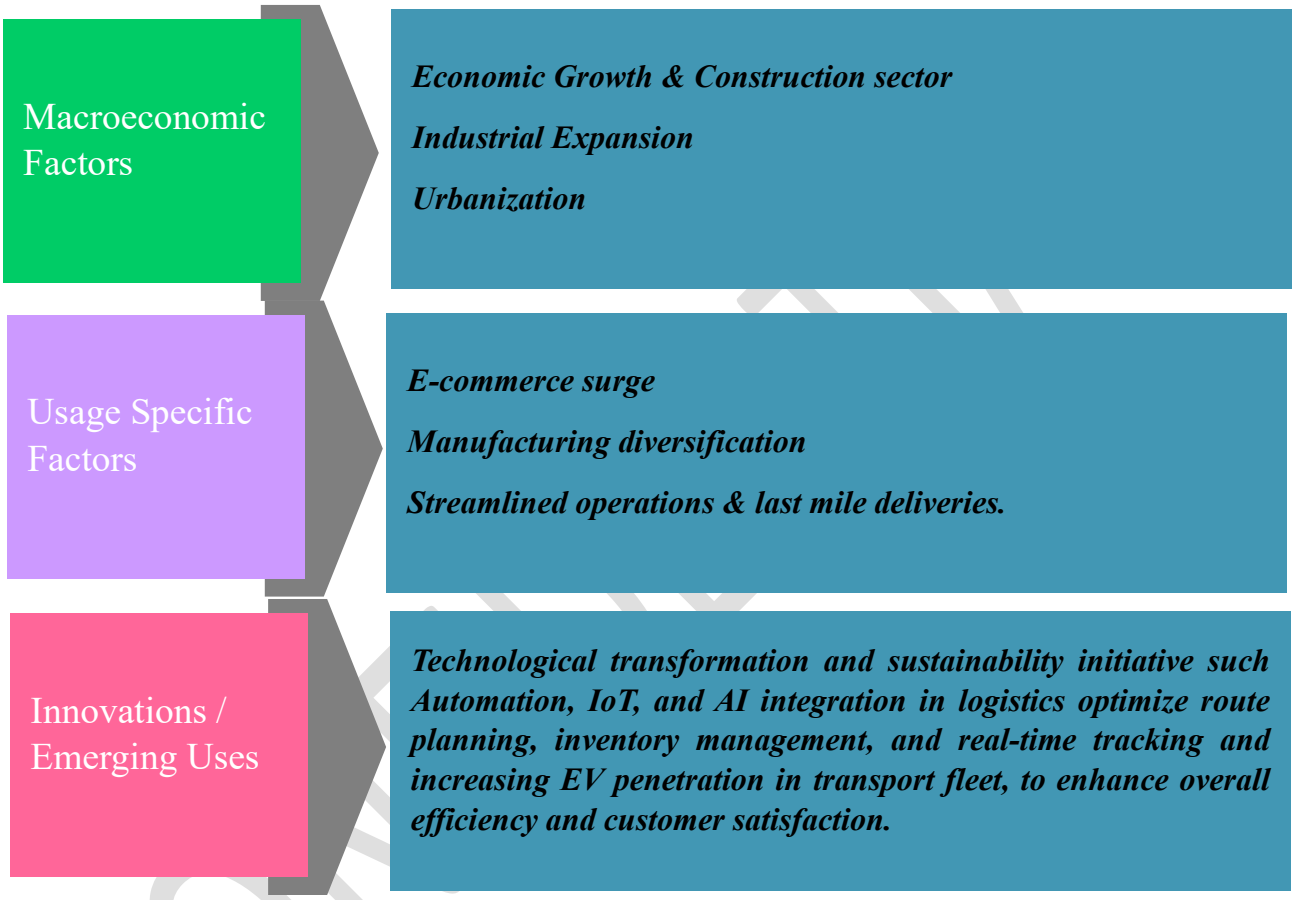
This advancement is largely due to strategic government initiatives such as the PM Gati Shakti National Master Plan and the National Logistics Policy, which have enhanced logistics efficiency and infrastructure. Investments in trade-related infrastructure and the adoption of digital technologies such as the Unified Logistics Interface Platform (ULIP) and the Logistics Data Bank have also played a crucial role. Additionally, the establishment of an Inter-Ministerial team and the National Committee for Trade Facilitation (NCTF) to address key logistics parameters have contributed to this progress. Notable improvements include India's climb in international shipment rankings from 44th to 22nd and an enhancement in infrastructure scores from 52nd to 47th in LPI 2010 to LPI 2023.



Source: World Bank

Key drivers of growth for the logistics sector:

The demand for logistics services in India is driven by government driven initiatives focussing to improve infrastructure and promote domestic manufactruing couple with technological advancements enhance efficiency, meeting the rising need for streamlined supply chains and timely deliveries across the country.

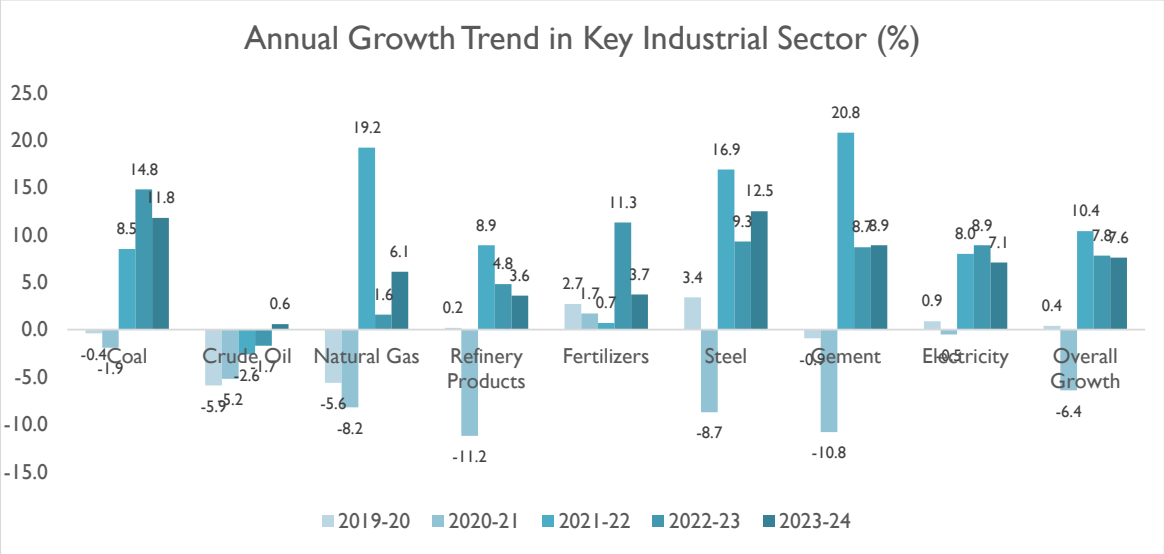


Economic Growth & Freight growth: Economy Growth indicate more products are bought and sold. Growth in economic activity translate in higher demand for cargo movement in domestic market. India's GDP is projected to grow in the range of 6.6-7% rate between FY 2025 to FY 2026. India handles 4.6 Bn tonnes of goods each year, amounting to a total annual cost of INR 9.5 trillion. Led by several initiatives such as Atmanirbhar Bharat, PLI scheme, National Logistics Policy, the government rising infrastructure spend, the Indian logistic industry is expected to witness freight movement in India. With growing economy, the freight movement in India is estimated to grow 5 times by 2050 while faster adoption of newer technologies and digitalization, e-commerce penetration and increased consumer preference for the reduced delivery time will have a critical role in shaping the overall logistic industry.

Urbanization: Urban population increased from 286 Mn to 377 Mn during the past decade (2001-11) and the proportion of urban population to total population increased from ~27% to ~31%. Further, the task force National Infrastructure observed that by 2030, around 42% of India s population would be urbanized from the current 31%. Increase in urbanization was synonymous with the rise in service sector which created jobs in urban centers. Urbanization in India has resulted in a burgeoning demand for various products into more cities and towns fueling the demand for logistic services.

Industrial Sector Expansion

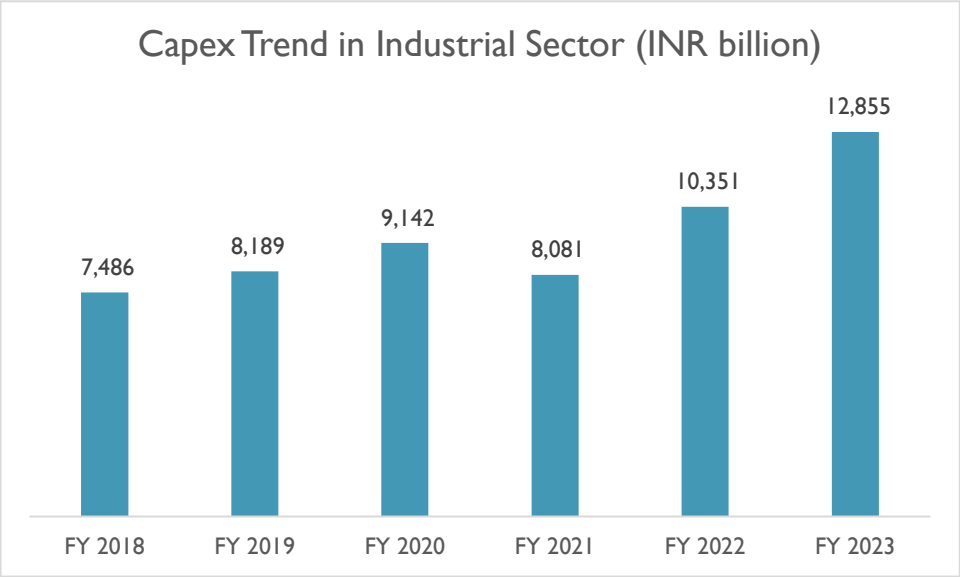
The overall growth of the industrial sector in India has exhibited a dynamic pattern over the past several years, reflecting both challenges and recoveries across various industries.



Source - Department for Promotion of Industry and Internal Trade Office of the Economic Adviser

Starting with a modest growth of 0.4% in 2019-20, the sector faced significant setbacks during the pandemic, resulting in a steep decline of -6.4% in 2020-21. However, a robust recovery began in subsequent years, with growth rates of 10.4% in 2021-22 and 7.8% in 2022-23. In 2023-24, the sector continued to grow at 7.6%, driven by increased government investments, infrastructure development, and a shift towards sustainable energy sources. This upward trajectory underscores the resilience of the industrial sector as it adapts to changing economic conditions and positions itself for future growth. The capex in industrial sector [2] measured in terms of GFCF has observed 11% CAGR growth, increasing from INR 7,486 billion to INR 12,855 billion.

[2] GFCF in manufacturing taken as a proxy to reflect industrial sector construction.

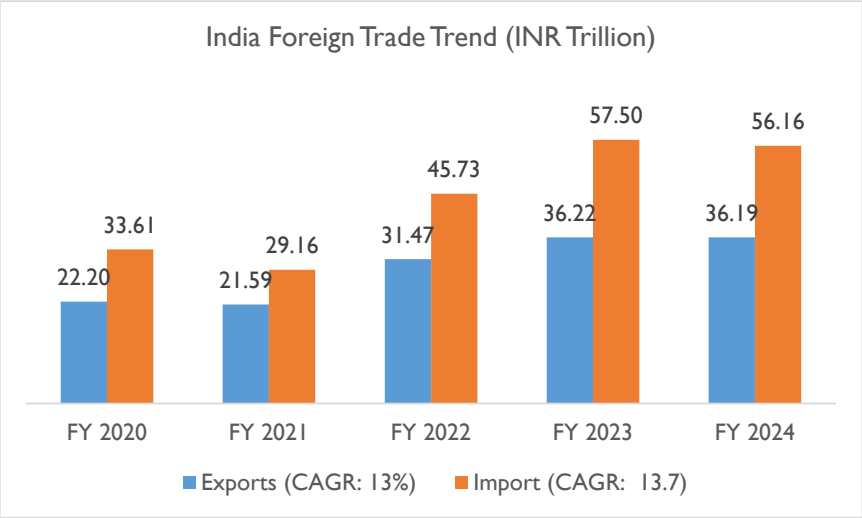


Sources: National Account Statistic 2024

The China Plus One strategy is an approach adopted by companies and countries to diversify their supply chains away from excessive reliance on China as a manufacturing and sourcing hub. The strategy emerged as a response to various factors, including rising labour costs in China, geopolitical tensions, trade uncertainties, and the need to mitigate risks associated with being overly dependent on a single country for production and sourcing.

India, being one of the largest economies in the world and home to a vast workforce and diverse manufacturing capabilities, has been actively leveraging the China Plus One strategy to attract investments and businesses looking to diversify their supply chains away from China.

Growing Trade Linkages: Increasing globalization has resulted in increasing trade flows across the globe including India. Around 90% of India's trade by volume and 70% by value take place through Maritime trade. Thus, Maritime trade forms an integral part of global supply chain, connecting markets together bringing goods from producer to consumer. The evolution in globalization have connected economies more tightly, while favorable scenario has ensured the demand scenario have stayed favorable. This has led to an unprecedented increase in flow of raw materials, intermediate goods and finished goods between production hubs and consumer hubs, with maritime trade playing a pivotal role. This is directly reflected in the volume of cargo handled by ports around the world, including India.



India's trade landscape has witnessed substantial growth, as evidenced by the positive trajectory of overall exports, and imports. This growing trade expansion is reflected in the rising trade figures. This surge in trade activities highlights the necessity for a robust road infrastructure network to ensure the smooth and efficient flow of goods to ports and airports.

In addition, India's Foreign Trade Policy for 2023 aims for dynamic openness and consultative feedback, with a clear objective of achieving USD 2 trillion in exports by 2030. To realize this ambitious goal, a well-connected and modernized road network is crucial, enabling the timely and seamless transportation of export goods.

Thus, the logistics sector is undergoing significant growth due to several key factors. The rise of e-commerce has increased the demand for efficient last-mile delivery, warehousing, and supply chain management. Government initiatives, such as the National Logistics Policy 2022, Bharatmala Pariyojana, and PM Gati Shakti, are speeding up infrastructure development and simplifying regulations, which encourage investment.

Technological advancements, including the Internet of Things (IoT), artificial intelligence (AI), automation, and data analytics, are enhancing efficiency, reducing costs, and improving customer experience. Increased foreign direct investment (FDI) is also facilitating infrastructure expansion and technological upgrades, further boosting overall efficiency.

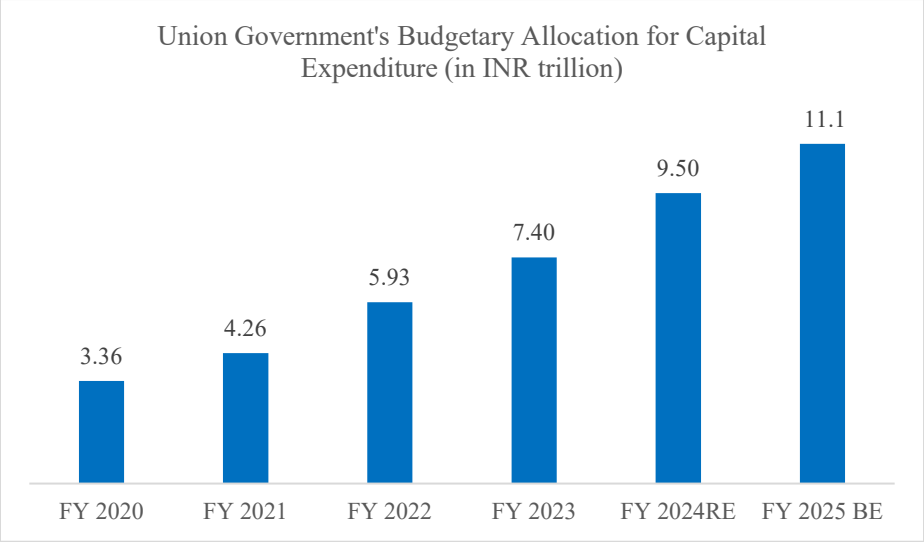
Globalization and regional trade agreements, such as the Regional Comprehensive Economic Partnership (RCEP) and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), are stimulating cross-border trade. Significant investments in transportation infrastructure, including ports, highways, and airports, are improving connectivity and lowering costs.

The growing adoption of digitalization and digital payments is streamlining transactions and operations, enhancing efficiency. Environmental sustainability is becoming a key consideration in logistics strategies, with a focus on eco-friendly practices like electric vehicles and optimized delivery routes. Finally, changing consumer behavior and expectations for faster, more reliable deliveries are driving logistics companies to invest in technology and infrastructure to meet these rising demands.

Government initiatives to enhance the logistics industry in India:

India's logistics industry is experiencing a major transformation, led by several government initiatives aimed at boosting the sector. Notably, implementing GST and recognizing logistics as infrastructure status are two critical moves that have been instrumental in driving this change.

The government remain committed of creating new and upgrading existing infrastructure to raise the quality of life and ease of living in India to global standards. The government has launched the National Infrastructure Pipeline (NIP), PM Gati Shakti and other flagship construction projects combined with other initiatives such as 'Make in India' and the production-linked incentives (PLI) scheme to augment the growth of infrastructure sector and support domestic manufacturing.



Union Budget, Government of India

The government continued thrust on infrastructure expansion is evident from rising budgetary allocation towards infrastructure. By allocating substantial funds to the development of roads, railways, airports, and urban infrastructure, the government stimulates economic growth and improves public facilities. This investment is expected to push the demand for various material than support promising opportunity for the logistic services.

Dedicated freight corridors: To facilitate the seamless transportation of goods and commodities across India, high-speed, large-capacity railway corridors – known as dedicated freight corridors – have been established. These corridors integrate state-of-the-art technology and improved infrastructure, promising enhanced efficiency, and effectiveness in logistics operations. As of January 2023, 1,724 kilometers of dedicated freight corridors have been completed. These corridors connect Delhi, Mumbai, Chennai, and Howrah, which are already part of the Indian Railways Network.

Multi-modal logistics parks: The development of multi-modal logistics parks is a strategic step towards providing comprehensive freight-handling facilities. Spread across at least 100 acres, these parks offer access to various modes of transportation, including road, rail, and air. They also provide advanced storage solutions such as mechanized warehouses, cold storage facilities, and essential services like customs clearance and quarantine zones. These parks aim to optimize logistics operations and enhance overall supply chain efficiency by lowering freight costs, warehouse expenses, and vehicle congestion. Multi-modal logistics parks have been established at 35 important strategic sites, with a total investment of INR. 500 Bn. These parks facilitate the smooth transportation of goods using various modes of transport. These MMLPs India that would cater to 50% of the freight movement, enable a 10% reduction in transportation costs and a12% reduction in carbon dioxide emissions.

Parivahan portal: To standardize processes and promote seamless information sharing across locations, the government has introduced the Parivahan portal. This digital platform encompasses ‘SARATHI’ for driving license processes and ‘VAHAN’ for vehicle registrations. Both functionalities are consolidated within a user-friendly mobile application, 'mParivahan.' This initiative streamlines administrative procedures and provides easy access to information related to registration cards and driver's licenses, facilitating smoother logistics operations.

Introduction of e-way bill: Implementing the e-way bill system mandates using electronic documentation for truckloads valued above Rs. 50,000. This digital documentation eliminates the need for physical paperwork and state boundary check posts, simplifying inter-state vehicle movement. The e-way bill initiative enhances logistics efficiency and expedites overall supply chain movement by shortening turnaround time and bureaucratic hurdles.

Gati Shakti: PM GatiShakti, launched by the Prime Minister in October 2021, aims to improve logistics efficiency and reduce costs by coordinating planning among different agencies. This initiative emphasizes breaking down barriers between departments and integrating infrastructure and logistics networks. PM Gati Shakti seeks to minimize disruptions and enhance efficiency by focusing on multi-modal connectivity and timely project completion. Through a National Master Plan, it intends to create an integrated transportation

and logistics network, fostering value addition and generating job opportunities. he PM Gati Shakti Master Plan enhances logistics. The 2024-25 Budget significantly raised infrastructure spending to INR 11.11 lakh crores for crucial multimodal logistics projects.

National Logistics Policy: The National Logistics Policy (NLP) aims to address cost and inefficiency issues in the logistics industry in India and focus on key areas such as process re-engineering, digitization, and multi-modal transport. Its objective is to develop a comprehensive, interdisciplinary, cross-sectoral, and multi-jurisdictional framework to improve the entire logistics ecosystem, making it more efficient and cost-effective. The policy aims to ensure quick last-mile delivery, eliminate transport-related challenges, and reduce wastage of agro-based products.

The NLP also seeks to enhance the competitiveness of Indian industries by promoting seamless movement of goods and reducing the logistics cost from 13-16% of GDP to the global average of 8% by 2030. With a high growth trajectory anticipated by experts, India's logistics market is estimated to be worth USD 380 billion in the next two years, up from USD 250 billion currently. The policy has implemented various initiatives to improve the logistics industry, such as increasing the total capacity of Indian ports, reducing average turn-around time of container vessels from 44 hours to 26 hours, constructing 40 air cargo terminals, providing cold storage facilities at 30 airports, and developing 35 multimodal hubs.

NLP will be implemented through a Comprehensive Logistics Action Plan (CLAP). The interventions proposed under the CLAP are:

(i) Integrated Digital Logistics Systems
(ii) Standardization of physical assets and benchmarking service quality standards
(iii) Logistics Human Resources Development and Capacity Building
(iv) State Engagement
(v) EXIM (Export-Import) Logistics
(vi) Service Improvement framework.
(vii) Sectoral Plan for Efficient Logistics
(viii) Facilitation of Development of Logistics Parks.

The Four Key Actions for National Logistics Policy (NLP) 2022 are:

- **Integration of Digital System (IDS):** This involves the digital integration of systems from seven different departments, including road transport, railways, aviation, commerce ministries and foreign trade, to streamline the logistics ecosystem. The IDS will integrate 30 different systems from these seven agencies.

- **Unified Logistics Interface Platform (ULIP):** This platform aims to provide faster and seamless cargo transportation and allows for confidential real-time information exchange. The Logistics Data Bank Project of the National Industrial Corridor Development Corporation (NICDC) has been leveraged for this purpose.

- **Ease of Logistics (ELOG):** This action focuses on promoting and ensuring ease of logistics for businesses through openness and accessibility.

- **System Improvement Group (SIG):** This group will be responsible for monitoring all logistics-related initiatives and identifying areas for improvement on a routine basis.

The NLP aims to establish an integrated, reliable, seamless, efficient, green, sustainable, and cost-effective logistics network leveraging best in class technology, standardization and streamlining of process and skilled manpower and enhance competitiveness of Indian industries.

Logistics Efficiency Enhancement Program (LEEP): LEEP is designed to improve freight transport efficiency. Associated cost, transportation time, and logistics practices like goods transferring and tracking through infrastructure technology and process interventions.

Trade facilitation: The logistics industry plays a pivotal role in facilitating domestic and international trade. Efficient logistics networks enable the smooth movement of goods across borders, fostering trade relationships and contributing to economic growth.

To enhance trade facilitation and improve trade for logistics, the following steps have been taken:

- An Export-Import (EXIM) Logistics Group has been created.

- The Ministry of Ports, Shipping, and Waterways has developed a comprehensive plan for port connectivity. It aims to address infrastructure gaps at the first and last mile, ensuring smooth goods movement. Additionally, 60 projects by the Ministry of Road Transport and Highways (MORTH) and 47 by Indian Railways have been approved to strengthen port connectivity.

- The Logistics Data Bank app monitors EXIM cargo, enhancing predictability, transparency, and reliability. This lowers logistics costs and reduces waste in the supply chain.

An Overview of the Shipping Industry

The shipping industry is a vital pillar of the global economy that enables the movement of goods and commodities across the globe. The shipping industry controls 80% of international trade and is the cheapest mode of transportation for goods worldwide. The effectiveness and efficiency of the shipping industry is critical to keep the global supply chains intact. In 2023, global maritime trade grew by 2.4% to 12.3 billion tons, rebounding from the 2022 contraction and is projected to grow by 2% in 2024 and at average annual rate of 2.4% till 2029 [3]. The volume of seaborne cargo handled by ports is comprised of global (i.e. overseas cargo) and domestic (i.e. coastal cargo) activities.

India has a vast coastline of 7,516.6 km, supporting the waterways freight movement and coastal economic activities through 12 major ports and 217 minor ports as of as of FY 2024 s. However, amongst minor port, cargo handling activities in India takes place through 78 Non-Major Ports while others are used for fishing purpose. The major ports fall under the administration of the central government of India and the minor/non-major ports are under the state administration.

During FY 2024, Major and Non-Major Ports in India have handled a total Cargo of 1542.42 million tonnes (MT) registering a growth of 7.5% over FY2023. In FY 2024, 53% of the total cargo and the minor ports accounted for 47% of the total cargo traffic handled by the ports in India. During FY 2024, cargo handled at Major and Non-Major Ports registered growth of 4.4% and 11.1% respectively. The share of Non- Major Ports to the total traffic handled at Indian Ports has increased from 45.3% in FY 2023 to 46.9% in the FY 2024.

India has reached 22nd rank in International Shipment category in 2023 as against 44th rank in 2014. Indian Ports "Turn Around Time" has reached 0.9 days which is better than USA (1.5 days), Australia (1.7 days), Singapore (1.0 days) etc.

India is moving up the global value chains (GVCs), with the share of GVC-related trade in gross trade rising to 40.3% in 2022 from 35.1% in 2019. The improvement in GVC participation is also reflected in increased pure backward GVC participation. Aided by government measures on trade facilitation and reduction in logistics cost, India's rank in the World Bank's Logistics Performance Index improved by six places, from 44th in 2018 to 38th in 2023 out of 139 countries.

In the future, the changing composition of India's export basket, enhancement in trade-related infrastructure, enhanced quality consciousness and product safety considerations in the private sector, and

[3] https://unctad.org/publication/review-maritime-transport-2024#:~:text=In%202023%2C%20global%20maritime%20trade,of%202.4%25%20annually%20through%202029.

stable policy environment are expected to play a significant role in driving India's rise as a global supplier of goods and services.

As part of port-led development, the Government of India proposes to develop a couple of smart cities. These smart cities shall have all the features of a modern IT-driven infrastructure and civic facilities. Kandla and Paradip are slated to have the first smart port cities. Plenty of investment opportunities will be available for town developers, IT companies, and civic service providers. To give a fillip to port-led industrialization, concept of Coastal Economic Zones (CEZs) has been introduced. CEZs will become the focal point for industrial development along the Indian coastline.

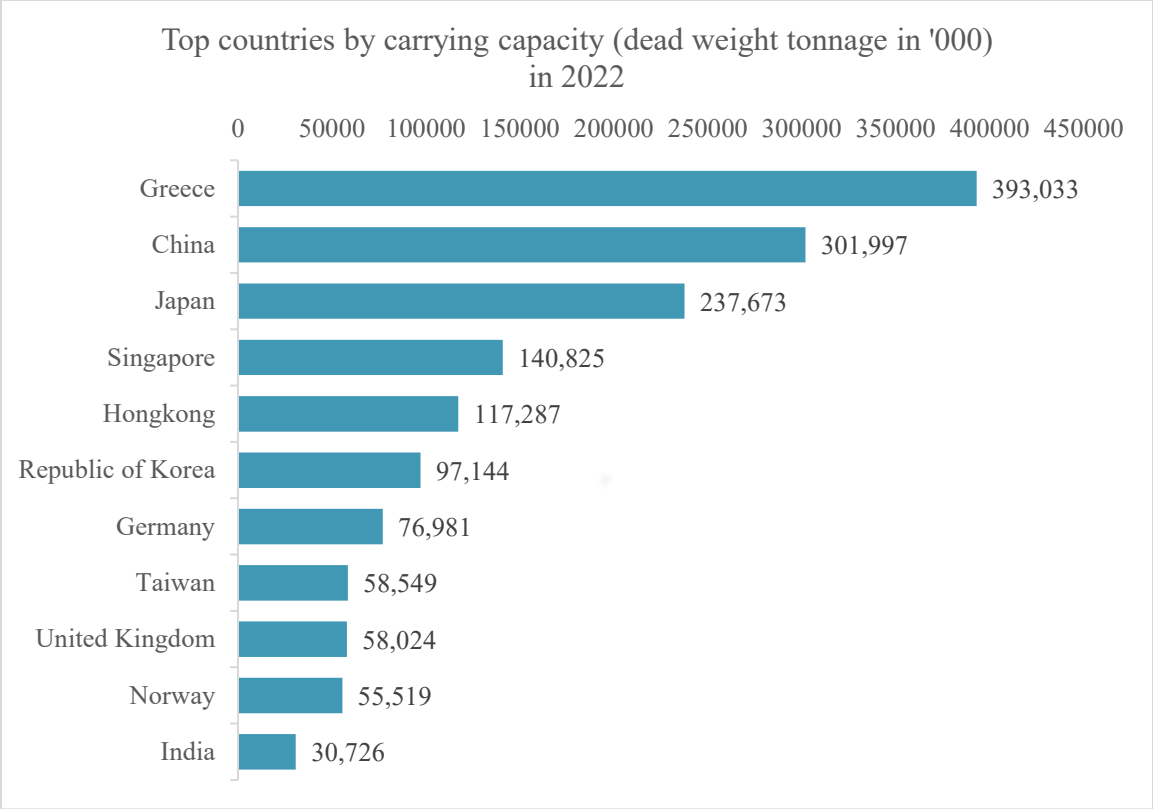
Among the top 10 ports in the world (by container throughput), 7 of them are Chinese ports. two Indian ports, Mundra and JNPT, appear within the top 30 container ports category at 27 and 28 respectively, as per the Lloyd's List 2023. By developing port infrastructure and improving government policies, India has a significant potential to become competitive with other leading maritime nations such as the U.S., China, Japan, Greece etc.

Various initiatives are being taken by central bodies to improve maritime transport in India by reducing turnaround time, enhance operational efficiency, improve capacity utilization, increase inland waterways, and lower costs. Sagar Mala Project and Maritime India Vision 2030 [4]are few of the largest sector specific policies being implemented across the country aimed at bringing India to the forefront of the global maritime transport.

Indian Shipping Industry v/s World

Out of the top 15 busiest cargo ports in the world, 7 belong to China with Shanghai Port being the busiest port in the world. The Shanghai port surpassed Singapore to become the leading port in 2010 and has since then remained at the top. Mundra and JNPA are among the top 30 ports in the world in terms of cargo traffic, but given the high number of ports in India, other Indian ports have huge potential to enter the list in the coming years. Advancement in technology, public private partnerships (PPP) to improve services at the ports and implementation of appropriate policies could facilitate the development of these ports.

[4] The Vision 2030 was launched by the Hon'ble Prime Minister of India in March 2021.



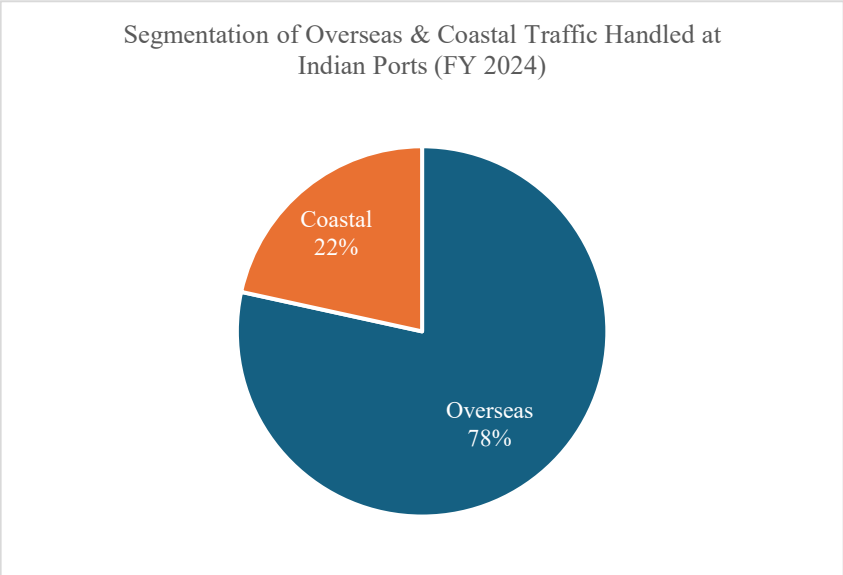
Sources: UNCTAD Maritime Review 2023

China is leading in the total number of vessels owned and has the largest container fleet in the world. East Asian countries are pioneers in the shipbuilding industry and continue to remain so. China is the largest shipbuilding nation with a global share of more than 40%, followed by South Korea and Japan with a market share of around 30% and 20% respectively.

Major types of services offered.

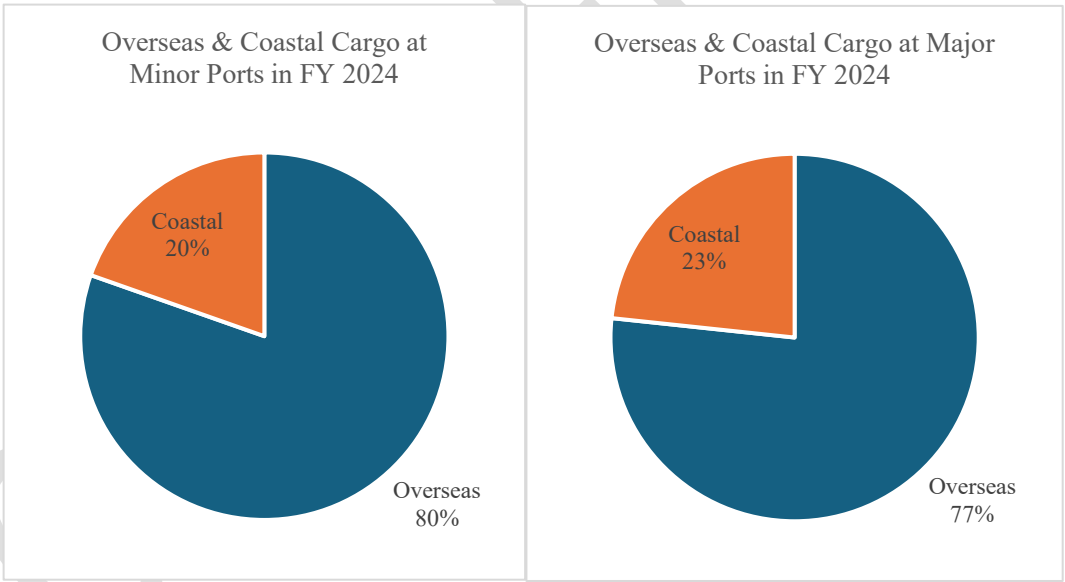
Maritime transport activity is driven by the growth in output and trade worldwide. Approximately 95% of India's foreign trade by volume and 70% by value moves through ocean routes. This is due to the country's extensive coastline of approximately 7,517 km, including islands. Oceanic routes play a vital role in the transport sector of India's economy, facilitating the movement of goods between the mainland and islands, as well as international trade.

The maritime sector in India comprises of ports, shipping, shipbuilding and ship repair, and inland water transport systems. Various types of services are involved in overseas trade, coastal trade as well as in inland waterways. The volume of seaborne cargo handled by ports is comprised of India (i.e. overseas cargo) and domestic (i.e. coastal cargo) activities which accounted for 78% and 22% share in total cargo handled by Indian ports.



Sources: Mninisty of Shipping

In India for FY 24, minor ports handle 20% of coastal cargo and 80% of overseas cargo. In contrast, major ports manage 77% of overseas cargo and 23% of coastal cargo for cargo traffic handling.



Source: Ministry Of Ports, Shipping & Waterways

Coastal shipping in India is still in its early stages, despite being one of the most cost-effective and environmentally friendly methods for transporting goods. Several initiatives are being undertaken to enhance coastal cargo shipping at minor ports. For instance, the Kerala Maritime Board initiated improvements in June 2024 by setting up berths and cranes for cargo transportation at Kollam, Beypore, Azhikkal, and Vizhinjam ports.

The shipping services in India are patterned like the global shipping services, namely, tramps and liners. A tramp service is a type of maritime shipping that operates without a fixed schedule or designated route. Tramp ships transport cargo based on demand, going wherever there is a need for their services. Liner shipping is the process of transporting goods and cargo from one destination to another by large ocean ships that move through regular routes on fixed schedules.

The other services that are used for expeditious flow of vessel traffic are tugboat operations, mooring/stevedoring services, lighterage, barge operations, dredging, etc. These are essential services for ports, especially in India, where the port infrastructure is lacking. These services in India for government-operated ports are mainly provided by third-party providers and does not involve port authorities or shipping companies.

Port Infrastructure in India

In India, ports are categorized into **major port**s and **non-major ports (minor ports)**. The classification of ports into major, minor, and intermediate has administrative significance. There is a total is 229 Ports available in India. Central Government of India while Minor is awarded to port operators/PPP partners and comes under the administration of state authorities under maritime boards (MBs).

Major Ports: Major ports are administered by the Ministry of Ports, Shipping, and Waterways under the Government of India. There are 12 major ports in India, which handle a large volume of container and cargo traffic. Ports provide an interface between ocean transport and land-based transport. There are 12 Government-Owned Major Ports in India out of which **6 are located on the East Coast** and **6 on the West Coast.** [5]

Western Coast:	**Eastern Coast:**
The Western Coastal Plain, which extends from Gujarat to Kerala, is particularly well-suited for port development because of its submerged coastlines and natural harbors. Major ports such as Kandla, Jawaharlal Nehru Port (Nhava Sheva), Marmagao, and Cochin play a crucial role in facilitating trade along this coast. These ports handle a variety of commodities, including	The Eastern Coastal Plains spread along the Bay of Bengal, though broader and featuring fertile deltas of rivers like the Mahanadi, Godavari, Krishna, and Kaveri, it faces challenges for port development due to their emergent nature and extended continental shelves. Major ports on this coast, such as Visakhapatnam, Paradip, and Chennai, primarily handle bulk cargo, including coal, iron ore, and agricultural products.

Vadhvan Port: Located near Dahanu town in Palghar district in Maharashtra is proposed to be established as the 13th Major port in the country.

petroleum, dry bulk cargo, and containers, making significant contributions to India's maritime trade.	However, the region has fewer natural harbors, leading to reliance on artificial infrastructure.
1. Mumbai, 2. Kandla, 3. Mangalore, 4. Jawaharlal Nehru Port (JNPT), 5. Mormugao, 6. Cochin.	1. Chennai, 2. Tuticorin, 3. Visakhapatnam, 4. Paradip, 5. Kolkata, 6. Ennore

Minor Ports: Non-major ports are administered by the State Maritime Boards of respective state governments, including private ports operating under the public-private partnership (PPP) model. There are 217 non-major ports in India, with cargo being handled only at 78 ports, while the others are used by fishing vessels and ferries.

Minor ports are awarded to port operators/PPP partners and come under the administration of state authorities under maritime boards (MBs). As on FY 2024, there are approximately 217 minor ports with the significantly large number of ports concentrated in the state of Gujarat, Maharashtra, Andaman and Nicobar Islands, Tamil Nadu, Kerela and Andhra Pradesh

Additionally, ports can also be classified based on their location and functionality, such as:

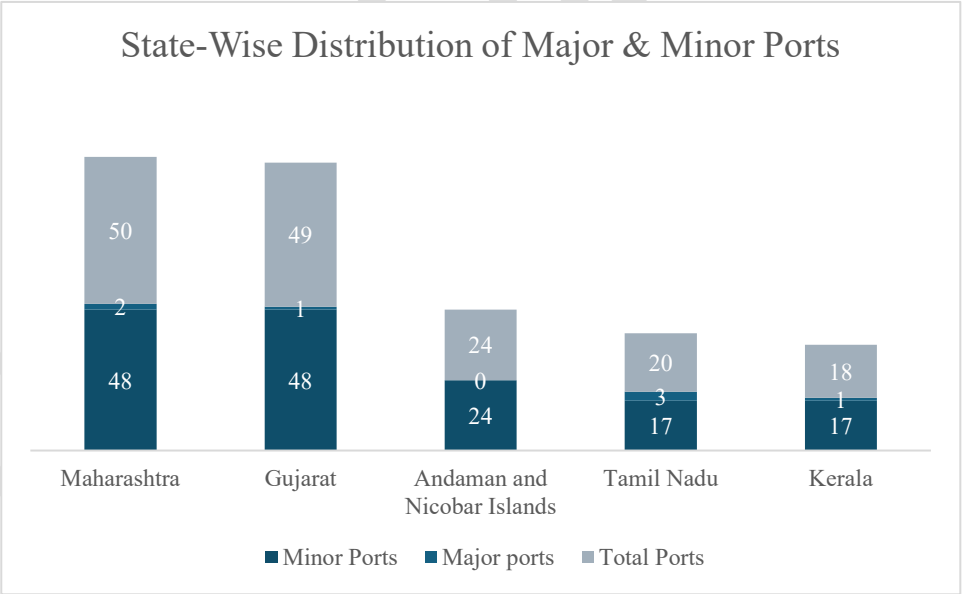
- **Seaports**: These are the most prevalent types of ports used for commercial shipping activities around the world.
- **Inland Ports**: These are in navigable lakes, rivers, or canals that have access to the sea or ocean and can allow ships or freight to sail from the ocean to the port to either load or unload its freight.
- **Dry Ports**: These are inland ports that have all the essential equipment to manage continuous shipment clearance, such as cargo instrumentation, rail sidings, storage facilities, and even container yards.
- **Commercial Ports**: These ports handle a wide range of cargo, including containers, bulk cargo, and project cargo.
- **Industrial Ports**: These ports are specialized to handle specific types of cargo, such as oil, gas, or chemicals.
- **Comprehensive Ports**: These ports offer a wide range of services, including cargo handling, warehousing, and logistics.

State-wise Distribution of Minor Ports in India:

With its extensive coastline, India has a well-distributed network of ports that includes 12 major ports and over 217 non-major ports (minor and intermediate) across its coastal states and union territories.

State/UT	Minor Ports	Major ports
Maharashtra	48	2
Gujarat	48	1
Andaman and Nicobar Islands	24	-
Tamil Nadu	17	3
Kerala	17	1
Andhra Pradesh	15	1
Odisha	14	1
Karnataka	13	1
Lakshadweep	10	-
Goa	5	1
Puducherry	3	-
Daman & Diu	2	-
West Bengal	1	1

Source: Ministry Of Ports, Shipping & Waterways (December 2023)

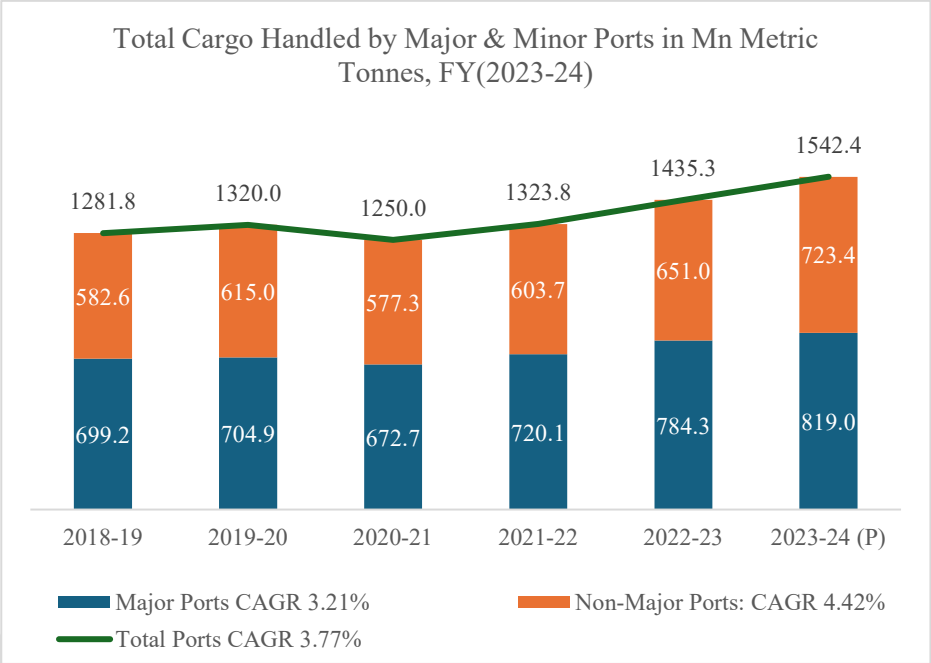


Source: Ministry Of Ports, Shipping & Waterways (December 2023)

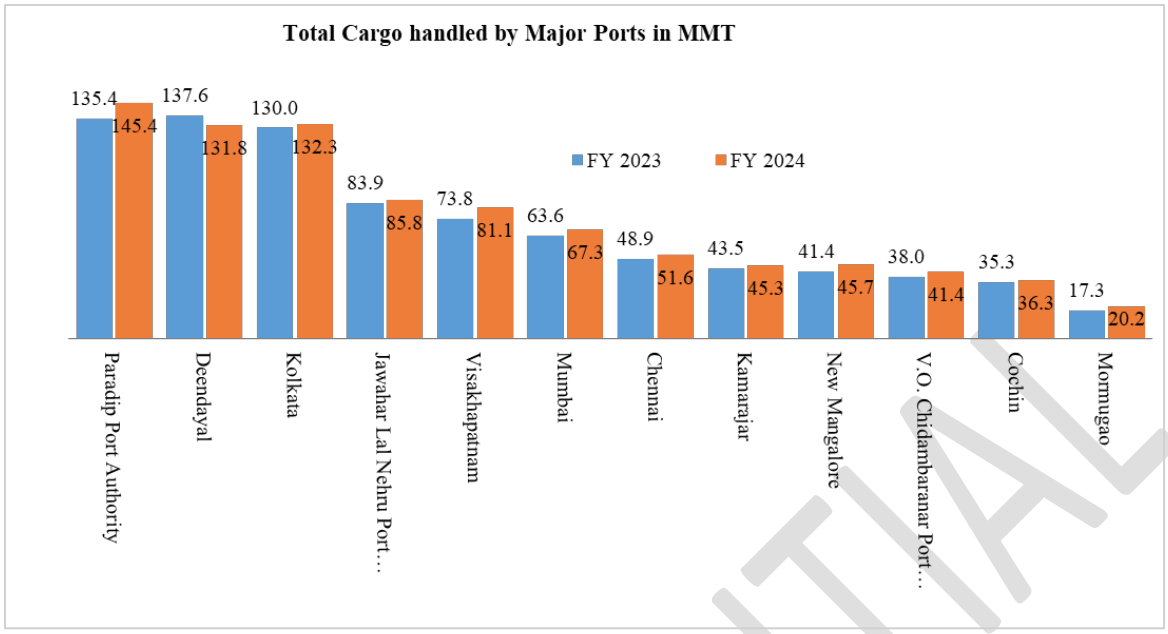
In terms of number of ports, Gujarat ranks second after Maharashtra and with the one major port name: Deendayal Port (Kandla) and about 48 minor ports. The minor ports in Gujarat, are strategically positioned to support the movement of specialized cargo like coal and minerals.

Historical Cargo Movement Trend in India

Cargo traffic has generally been on the rise, except during the COVID-19 pandemic when international trade came to a standstill. India's major and minor ports collectively handled a steadily increasing cargo volume, reaching 1,542 million tonnes in FY 2023-24 compared to 1,435 million tonnes in the previous fiscal year, exhibiting 7.5% y-o-y growth. This growth reflects an expanding maritime economy, with overseas cargo traffic contributing 1,210 million tonnes and coastal cargo traffic accounting for 333 million tonnes in FY 2024, underscores India's growing international trade and coastal connectivity, showcasing the pivotal role of ports in supporting the nation's economic infrastructure. Cargo traffic at India's major ports grew by 4.4% during FY2024, on y-oy basis while minor port exhibited a year-on-year growth rate of 11.5% in cargo traffic handled.

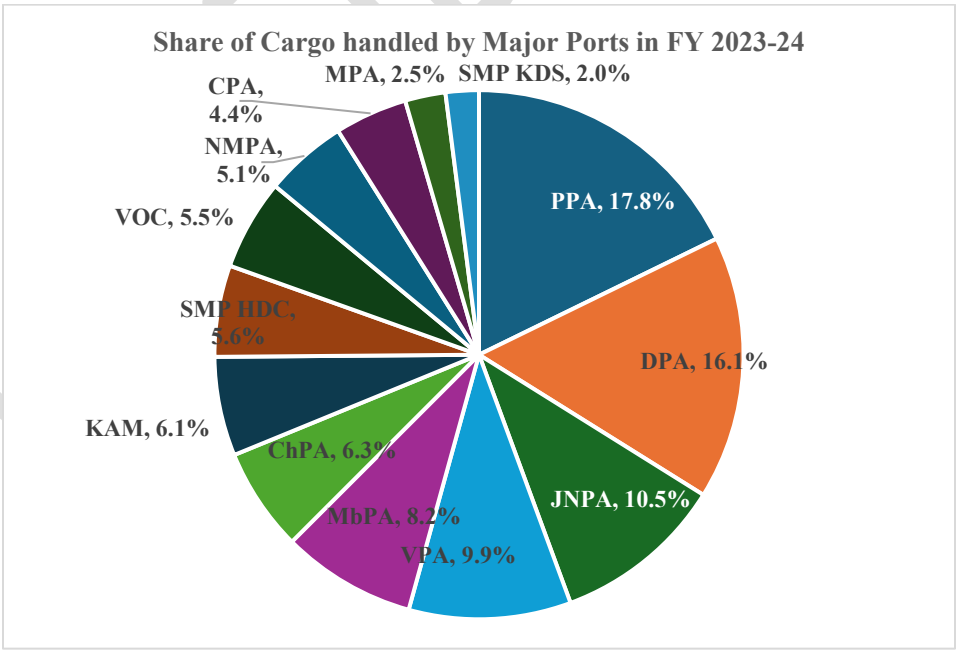


Source: Ministry Of Ports, Shipping & Waterways



Source: Ministry Of Ports, Shipping & Waterways

Paradip Port in Odisha has emerged as India's largest major port in terms of cargo volumes, handling 145.4 million tonnes in FY 2024. This marked the first time it surpassed Deendayal Port Authority in Gujarat in its 56-year history, driven by improved operational efficiency, record coastal shipping traffic, and increased thermal coal shipments. The top 5 major ports handled 62.4 % of the total cargo in FY 2023-24. The cargo traffic at India's major ports grew by 4.3% y-o-y between FY2022-23 and FY2023-24

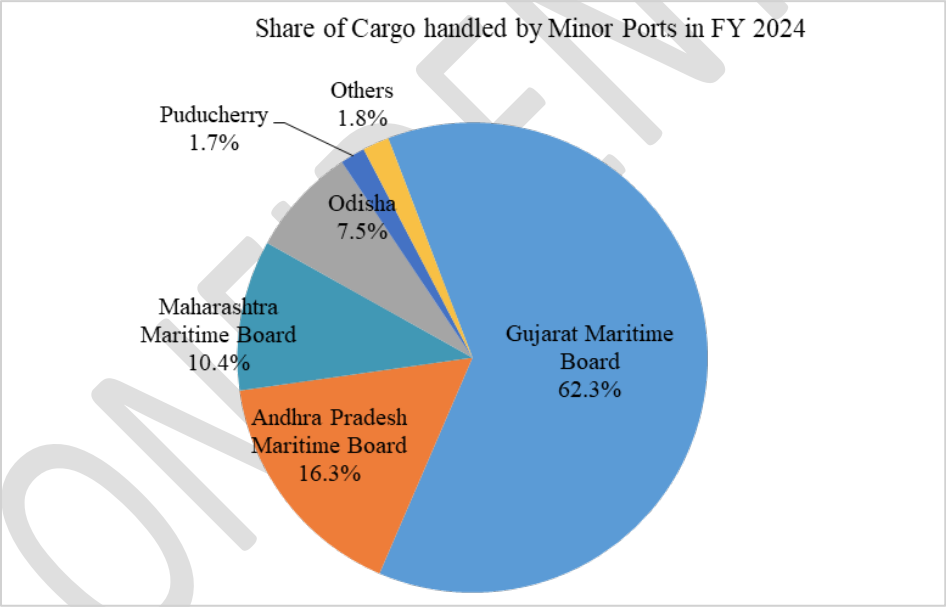


Sources: Ministry of Ports, Shipping and Waterways

Minor Port Cargo Traffic:

While traffic at minor ports is lower, resulting in less congestion, there is greater potential for increased cargo handling as infrastructure improvements and expansions can be strategically planned. Minor ports are gradually gaining market share from major ports, with a significant portion of cargo traffic shifting to these smaller facilities. In FY 2024, the total cargo handled at minor ports collectively reached 723.0 MMT, marking an 11.2% increase from the prior fiscal year's total of 651 MMT in FY2023. This significant rise at minor ports can be attributed to strong increases in iron ore export which saw a significant increase of 43.7% during FY 2024. .

The **top five state maritime boards (SMBs)** handled 97.85% of total cargo in FY2023-24. These five SMBs, as illustrated in the accompanying pie chart, have consistently ranked at the top. In FY2024, the Gujarat Maritime Board handled the most cargo at 63.2%, followed by the Andhra Maritime Board at 16.3% and the Maharashtra Maritime Board at 10.4%.



Sources: Ministry of Ports, Shipping and Waterways

The Gujarat Maritime Board has also implemented measures to boost cargo handling at the minor ports under its regulation. The state government has worked on modernization of minor port and introduce business friendly policies to leverages its 1,600 km coastline to drive local industry that translate in overall trade and industry growth.

Over FY 2024-28, minor ports cargo traffic is expected to increase in the range of 3-6%, largely due to moderation in POL traffic and coal imports.

Cargo Handling Capacity Expansion

Major Ports: Cargo handling capacity at major ports increased from 1,617 Mn Metric Tonnes in FY 2023 to 1,630 Mn Metric Tonnes

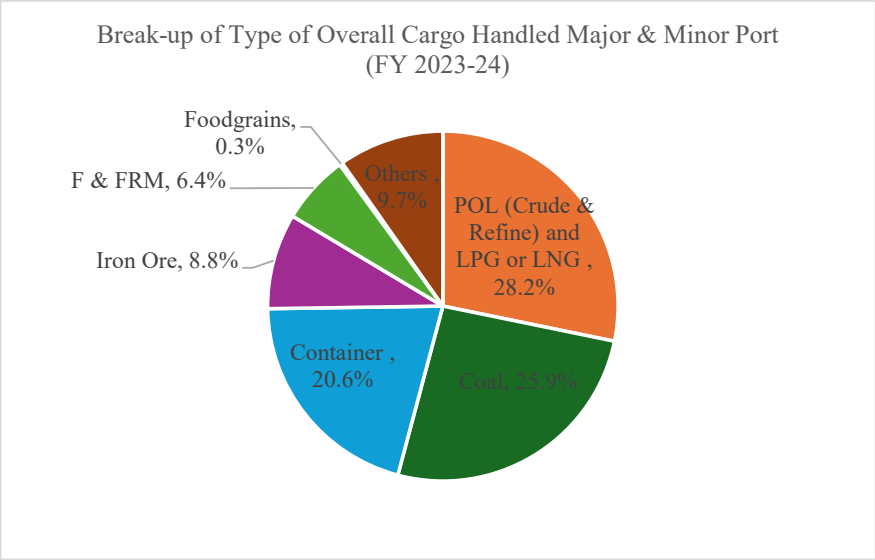
Minor Ports: Cargo handling capacity at minor ports increased from 1010 MMT million metric tonnes (MMT) in FY 2023 to 1,060 MMT in FY 2023.

Types of Cargo shipped.

Maritime trade primarily consists of the following major cargos:

- **Dry bulk cargo** includes both major bulks such as iron ore (including fine and pellets), coal (thermal, cooking, and other types), and grain, as well as minor bulks, which encompass metals, minerals, agricultural bulk commodities (Agri bulks), and softs like sugar.
- **Other dry cargo** refers to items that don't fall under major or minor bulks, such as cars and vehicles, Roll-on/Roll-off (RoRo) cargo, project cargo, reefer cargo (requiring refrigeration but not in containers), and breakbulk cargo not classified as minor bulk.
- **Oil cargo** is divided into crude oil, refined oil products, and includes **POL** (Petroleum, Oil, and Lubricants), covering crude, products, and LPG/LNG. The **gas sector** covers liquefied petroleum gas (LPG), liquefied natural gas (LNG), and ammonia.
- **Fertilizers and fertilizer raw materials (F&FRM)** include both dry and liquid fertilizers, along with raw materials in both forms.

Key Commodities handled by Indian Ports

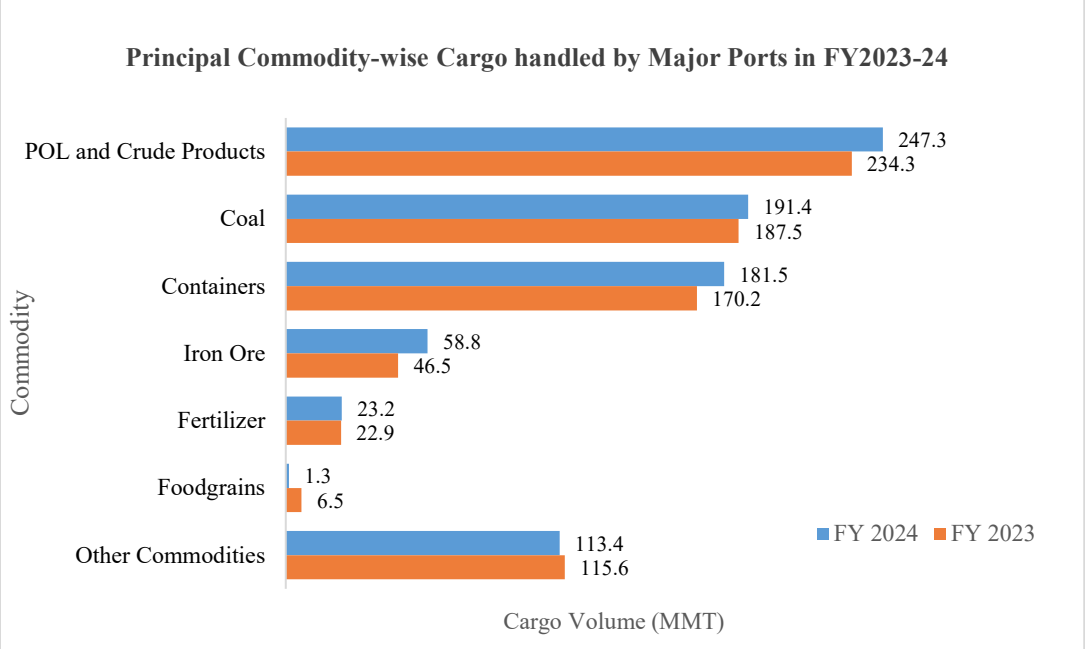


Sources: Ministry of Ports, Shipping and Waterways

In FY2024, POL (Crude & Refine) and LPG or LNG and coal and was the most handled commodity by top Indian ports due to high domestic demands in the country while Coal stood as the most handled commodity by the non-major port in India.

Break-up of Type of Commodities Handled by Major Ports, FY 2024

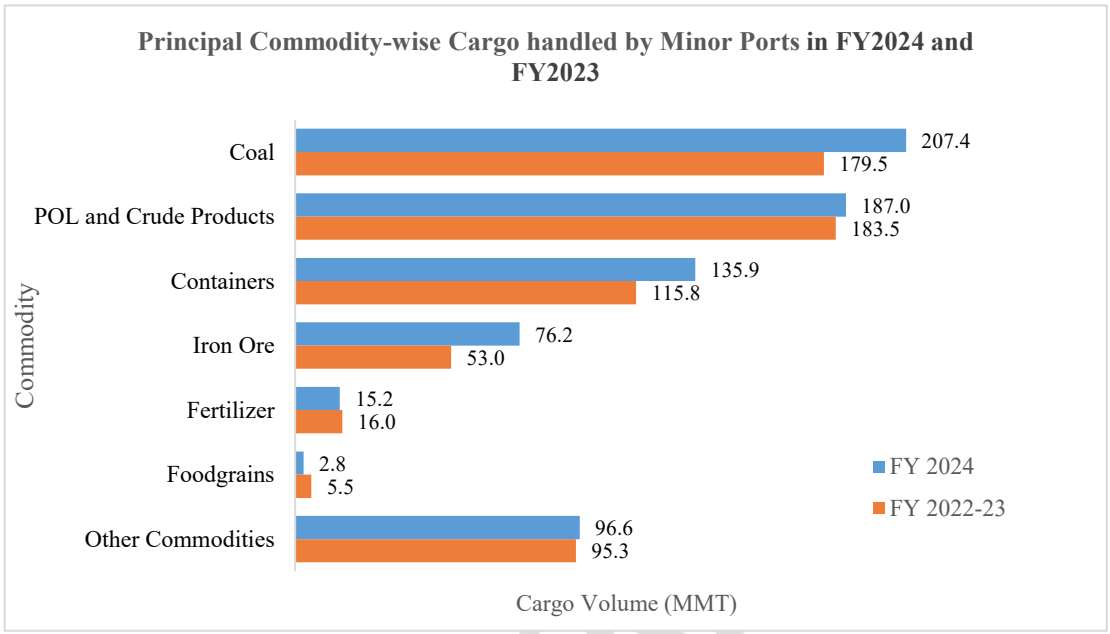
FY 2024	Type of Cargo	% share
POL (Crude & Refine) and LPG or LNG	247.32	30.2%
Coal	191.44	23.4%
Container	181.54	22.2%
Others	113.37	13.9%
Iron Ore	59.75	7.3%
F & FRM	23.22	2.8%
Foodgrains	1.34	0.2%
Total	817.98	100%



Sources: Ministry of Ports, Shipping and Waterways

Break-up of Type of Commodities Handled by Non-Major Ports, FY 2024

FY 2024	Type of Cargo	% share
Coal	207.39	28.8%
POL (Crude & Refine) and LPG or LNG	187.05	25.9%
Container	135.85	18.8%
Iron Ore	76.17	10.6%
F & FRM	75.18	10.4%
Others	36.58	5.1%
Foodgrains	2.83	0.4%
Total	721.05	100%

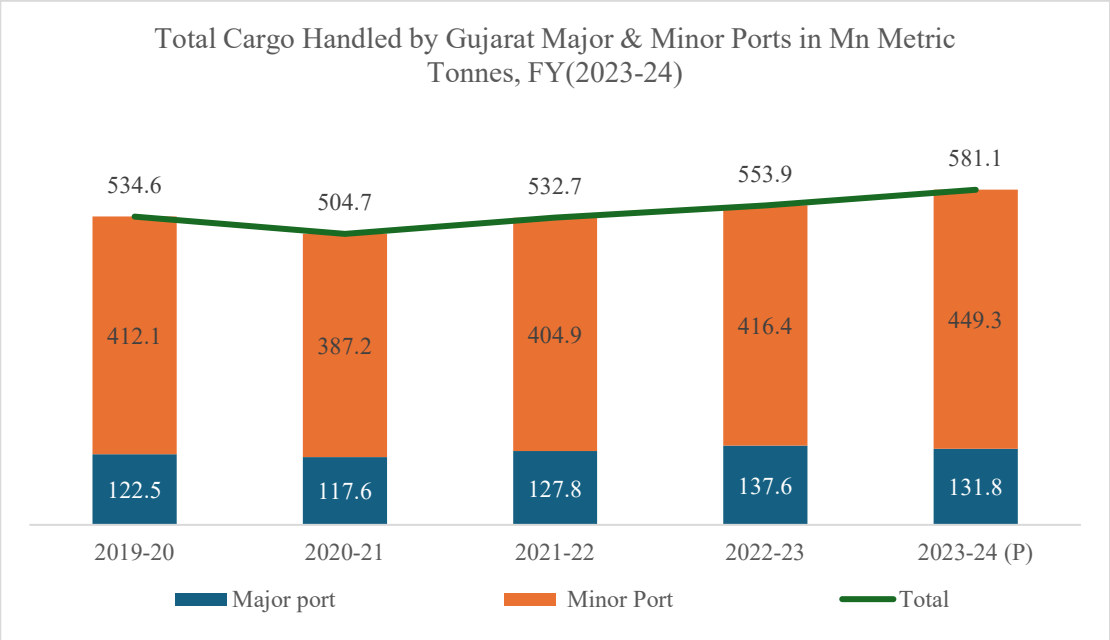


Sources: Ministry of Ports, Shipping and Waterways

Cargo movement: Gujarat

Gujarat has the advantage of a vast hinterland covering the Northern and Central Indian States and as a result, there is high demand for the services offered by the non-major ports in Gujarat. The participation of the private sector has been a significant contributing factor in the development of non-major ports in Gujarat. Gujarat is a principal maritime State with a natural coastline of about 1,215 kms. (16% of India's total coastline). The State has 48 non-major ports which are under the jurisdiction of Gujarat Maritime Board (GMB). Out of 48 non-major ports, traffic is handled at 17 non-major ports. The remaining 31 non-major ports are used for fishing activities and have negligible traffic.

Gujarat Maritime Board has the highest share of total cargo traffic handled among all the other maritime boards at 63.2% during FY 2024. Gujarat's market share in overseas trade was 68.8% and coastal share was 38.8% during the same period.



Sources: Ministry of Ports, Shipping and Waterways, TRW

The total cargo handled by Gujarat port has increased at 2.1% CAGR where cargo traffic handled by major port grew by1.9% CAGR and minor port by 2.2% CAGR.

% share Breakup in Cargo Handled by Major Vs Minor Port in Gujarat

	2019-20	2020-21	2021-22	2022-23	2023-24 (P)
Major port	22.9%	23.3%	24.0%	24.8%	22.7%
Minor Port	77.1%	76.7%	76.0%	75.2%	77.3%

Cargo Handled by Overseas Vs Coastal trade in Gujarat (MMT)

Segment	2019-20	2020-21	2021-22	2022-23	2023-24 (P)
Overseas	471.2	450.0	472.0	493.9	519.5
Coastal	63.4	54.7	60.7	60.1	61.6
Total Cargo movement Trade	534.6	504.7	532.7	553.9	581.1

% share Breakup in Cargo Handled by Overseas Vs Coastal trade in Gujarat

	2019-20	2020-21	2021-22	2022-23	2023-24 (P)
Overseas	88.1%	89.2%	88.6%	89.2%	89.4%
Coastal	11.9%	10.8%	11.4%	10.8%	10.6%

Cargo Break-up of Overseas Vs Coastal trade of Major Port in Gujarat

(Volume in MMT)

Gujarat Major Port	2019-20	2020-21	2021-22	2022-23	2023-24 (P)	CAGR FY '20-24
Overseas	105.7	102.4	112.6	123.88	117.93	2.8%
Coastal	16.8	15.2	15.2	13.68	13.89	-4.6%
Total	**122.5**	**117.6**	**127.8**	**137.56**	**131.82**	**1.9%**

Cargo Break-up of Overseas Vs Coastal trade of Non- Major Port in Gujarat

Gujarat Non-Major Port	2019-20	2020-21	2021-22	2022-23	2023-24 (P)	CAGR
Overseas	365.5	347.6	359.4	370.0	401.6	2.4%
Coastal	46.6	39.6	45.5	46.4	47.7	0.6%
Total	365.5	347.6	359.4	370.0	401.6	2.2%

Kandla port also known as Deendayal Port is the second largest major port in India in terms of cargo traffic, which handled cargo traffic of 131.8 MMT during FY 2024. Kandla port observed a decline in between FY 2023 and FY 2024 by 4.2%, which led to Paradip port in Odisha overtaking Kandla Port to become the top major port of India. The steepest drop in Kandla port traffic was observed in the overseas trade which fell by 4.8% while the coastal cargo fell by 1.5% in FY 2024.

Traffic Handled at Minor Ports Gujarat

Ports	2018-19	2019-20	2020-21	2021-22	2022-23	CAGR
Magdalla	41.21	44.95	46.98	49.69	55.88	7.9%
Okha	47.38	40.68	33.5	39.87	51.48	2.1%
Navlakhi	54.13	53.8	43.68	44.11	38.19	-8.4%
Bhavnagar	31.22	24.72	24.14	27.53	32.95	1.4%
Bedi	9.84	9.98	21.84	10.14	31.82	34.1%
Porbandar	14.83	16.61	11.17	17.92	19.48	7.1%
Jafrabad	8.39	9.99	7.94	8.83	9.74	3.8%
Mundra(Old)	1.4	1.36	1.64	1.83	1.96	8.8%
Veraval	0	1.88	0	1.85	0	
Total	**208.4**	**203.97**	**190.89**	**201.77**	**241.5**	3.8%
Alang(LDT)	17.73	16.23	17.61	14.57	11.47	-10.3%
Sachana(LDT)	0	0	0	0	0	
Grand Total	**226.13**	**220.2**	**208.5**	**216.34**	**252.97**	2.8%

Figures in Lakhs Tons

The minor ports of Gujarat fall under the Gujarat Maritime Board (GMB). The largest trading ports in Gujarat in FY 2023 were Magdalla and Okha ports with a collective estimated share of around 42% among the minor ports.

Indian Shipping Fleet

The types of ships engaged in India's overseas trade include dry cargo liners, cellular container ships, dry cargo bulk carriers, ore/oil/bulk carriers, oil tankers (product carriers), passenger cum-cargo vessels, acid carriers, timer carriers, LPG carriers, etc. The shipping industry also caters to the requirements of coastal trade and offshore supply vessels (OSVs).

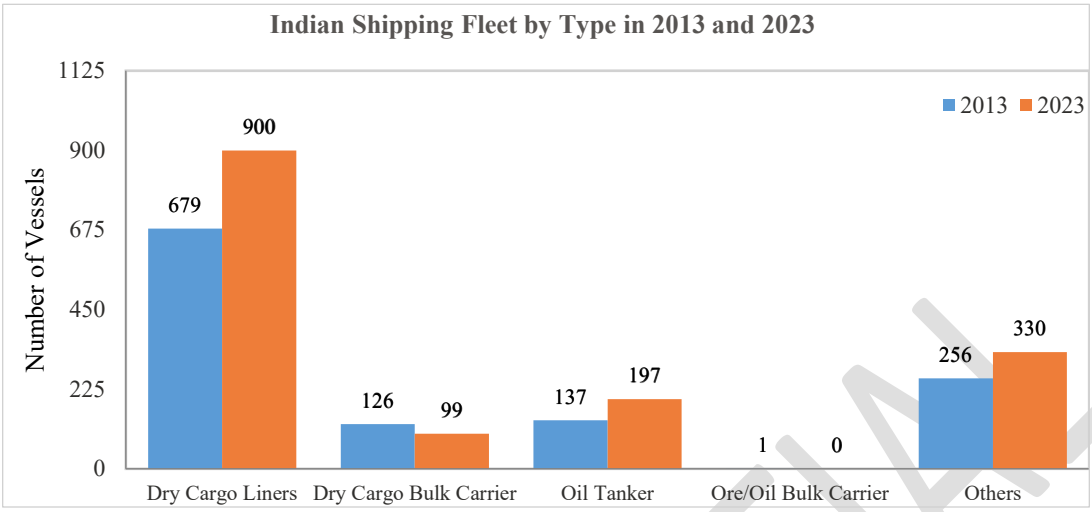
Indian Fleet (Types of vessels):

- **Dry cargo liners** – Includes Barges, Bulk Carriers, Cellular Containers, Container Ship, Dredgers, Dumb Crane Barge, Dumb Pontoon Barge, General Cargo, Hooper Dredger, Mini BC, Motorboat, Motor Launch, Motorship, Motor Tanker, Motor Tender, Motor Tug, MPSV, MSV, Other Cargo Ship, Ro-Ro Container Vessels, Steel Welded Boat, Supply Vessels, Supply Ships, Support Ships and Tugs
- **Dry Cargo Bulk carrier** - Includes AHTS, Cement Carriers, Electric Propulsion, Floating Cranes, Research Vessels, Steel Carrier, Twin Screw and Well Stimulation
- **Oil Tanker** - Includes Acid Carriers, Chemical Tanker, Gas Carrier, LPG Carriers, LPG Tankers, LNG Carriers and Ethylene Gas Carriers
- **Passenger Cum Cargo** - Includes Passenger services, Passenger High-Speed Crafts, Passenger Ship, Passenger Vessel, Pleasure Craft, Pleasure Yachts and Yachts.
- **Off-shore supply** - Includes Product Tankers
- **Specialized for offshore services** - Includes Crew Boats, Offshore Support Vessel, Lighterage Vessel, Stevedoring Vessel, Pilot Boat, Pilot Launch, Pilot Vessel, Platform Supply Vessel, Polar Satellite Vessels, Utility Boats, Utility Craft, Utility Vessel, and Work Boat.

Current Scenario: Fleet Size / Gross Tonnage

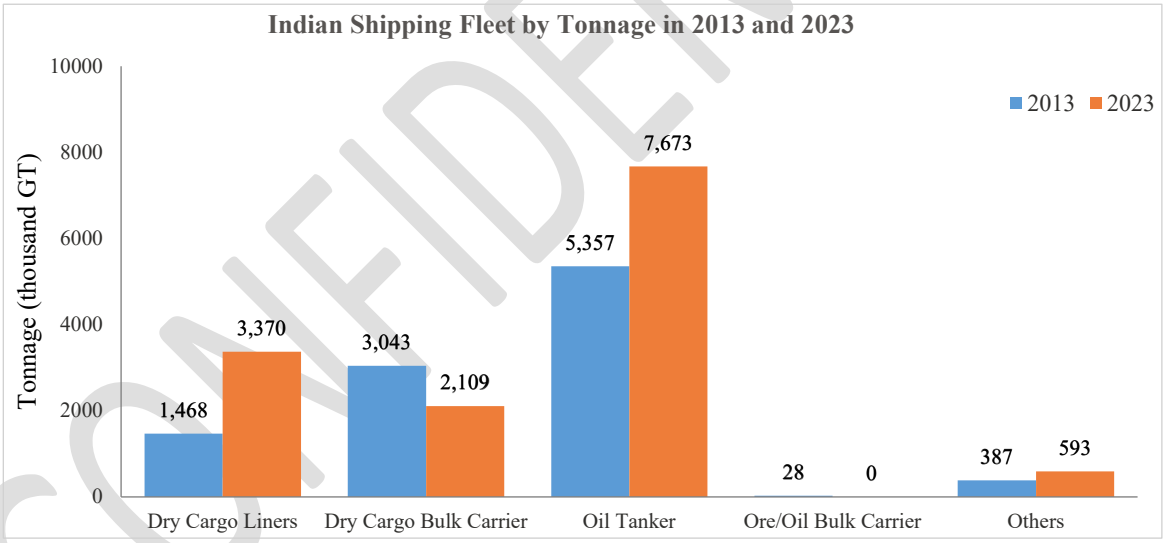
Currently, India has a merchant fleet of 1,526 seagoing ships with total capacity of 13.8 Mn GT. In the year 2022, India was ranked 18th with respect to leading flag of registration by dead weight tonnage and 19th by carrying capacity in dead weight tonnage and accounted for about 1.3% of the total global dead weight tonnage.

Fleet classification analysis by the type of vessels in 2023 shows that the maximum numbers of vessels (900) were Dry Cargo Liner followed by Oil tankers (197). In terms of GT, the maximum 55.8% tonnage (7.67 million GT) was in the category of Oil Tankers whereas, Dry Cargo Liner vessels (which accounted for highest number of vessels) contributed only 24.5% (3.37 million GT) to India's total tonnage.



Source: Ministry of Ports, Shipping and Waterways

The tonnage share of different types of Indian shipping fleet has increased over the years except for than of dry cargo bulk carriers and ore/oil bulk carriers. The share of oil tankers has increased from 52.6% in 2013 to 55.8% in 2023 and share of dry cargo liners increased from 14.1% to 24.5% within the same period.

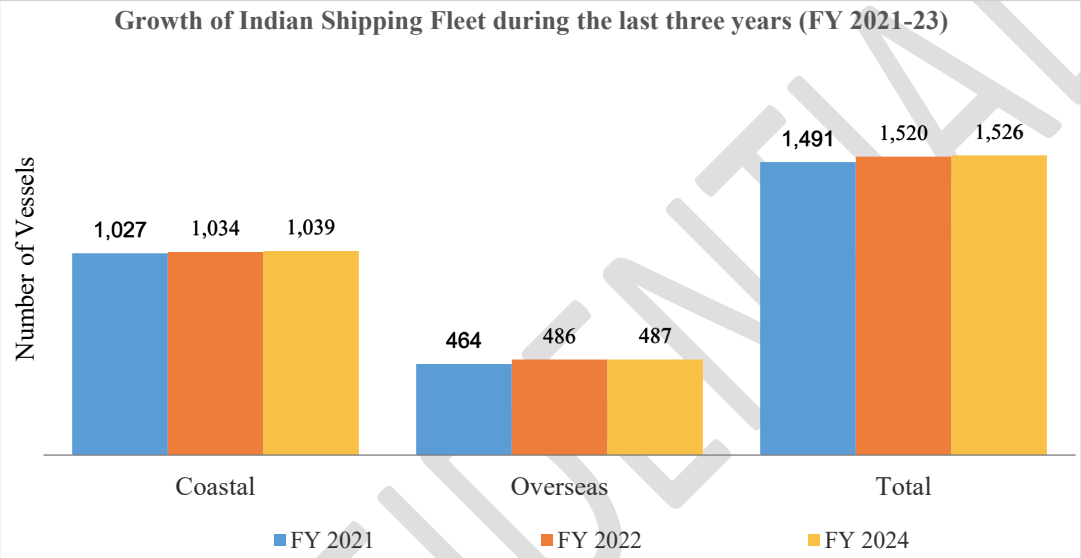


Source: Ministry of Ports, Shipping and Waterways

The share of dry cargo bulk carriers has decreased from 29.3% in 2013 to 15.3% in 2023, mainly due to aging shipping fleet being scrapped. The import of dry bulk cargo is on the rise owing to the increasing Indian population leading to its high demand.

Historical Growth in Shipping Fleet

Out of the 1,526 vessels registered as on 31st December 2023, 68% vessels were engaged in coastal trade and the remaining 32% vessels were engaged for overseas trade. In terms of load carrying, the overseas trade was 88% of Indian GT in contrast to only 12% of Indian GT in coastal trade. There was a considerable rise in the shipping fleet number as well as tonnage between 2021 and 2022, but there was not much of an increase in 2023. This growth trend is similar across coastal as well as overseas shipping fleet.



Source: Ministry of Ports, Shipping and Waterways

As per data in 2023, the age profile of the Indian shipping fleet shows that around 46% of the fleet is 20 years and more, 16% between 16-20 years, 21% between 11-15 years, 10% between 6-10 years and only 7% is 0-5 years old.

This was slightly different in 2021 as the aged fleet size was comparatively lower. The age profile of the shipping fleet showed that around 44% of the fleet was 20 years and more, 11% between 16-20 years, 20% between 11-15 years, 16% between 6-10 years and 9% was 0-5 years old.

Number of Registered Vessel of Major Shipping Companies as on 31 Dec 2023

Company Name	Vessel Count	Number of Vessel Type
OCEAN SPARKLE LTD.	69	66 TUG, 1 OFF , 1 PASS, 1PSV
SHIPPING CORPN. OF INDIA	64	20 TANC, 15 DRB, 8 TNAP, 6 TUG 6 OFF, 2 CCON, 2 DRY, 1 BC, 1 AHTS, 2 SV, 1GC,
GREAT EASTERN SHIPPING CO. LTD.	44	12 TANC, 12TANP, 9BC, 6 DRB, , 1SV, 2G.C, 1 CHT, 1 LPGT
RELIANCE INDUSTRIES LTD	28	16TUG, 6 PGER, 3 ECAR, 2 SOFF, 1OSS
ADANI HARBOUR SERVICES P. LTD.	27	27 TUGS

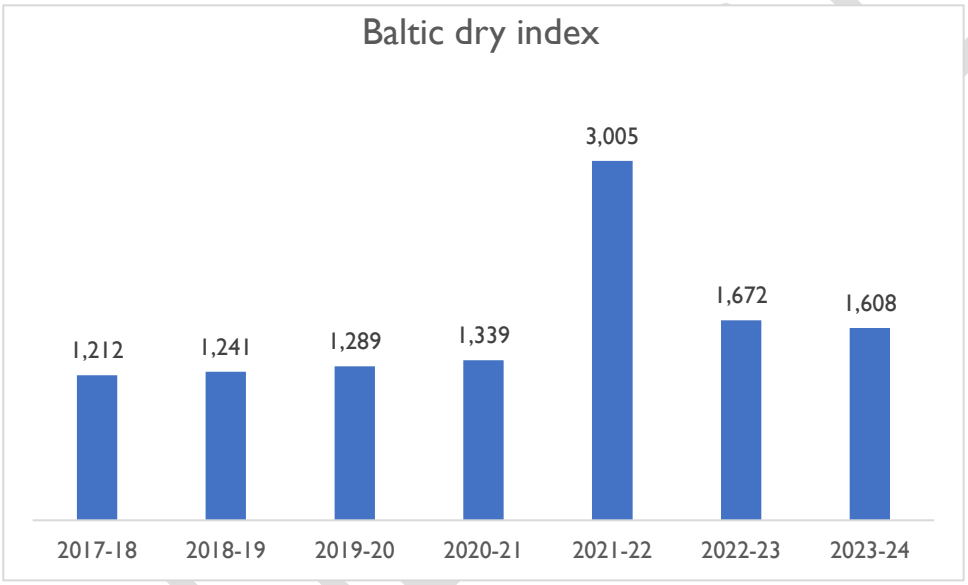
Source: Indian Shipping Statistics 2023

ACRONYMS

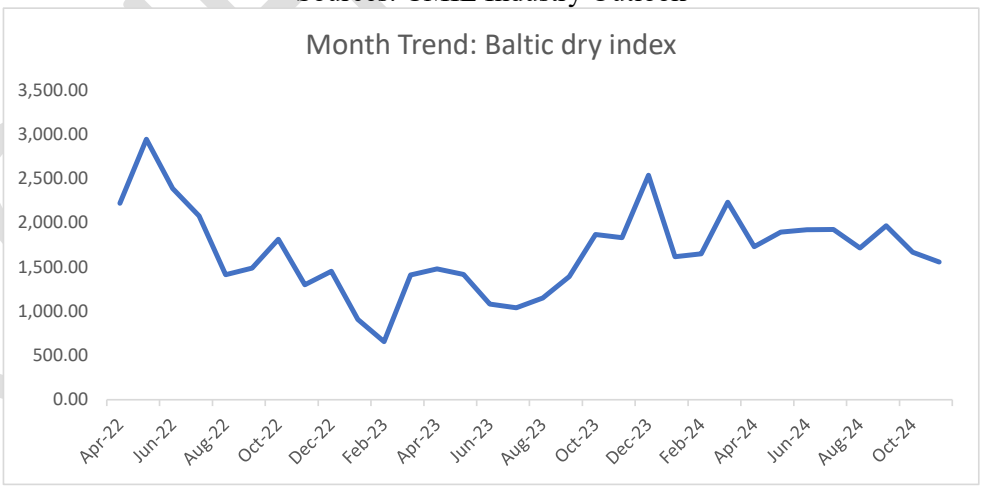
ECAR	ETHYLENE GAS CARRIER
SOFF	SPECIALISED VESSLES FOR OFFSHORE
OSS	OFFSHORE SUPPORT VESSEL
TANC	OIL TANKER (CRUDE)
TNAP	OIL TANKER (PC)
TUG	TUG
OFF	OFFSHORE SUPPLY VESSEL
CCON	CELLULAR CONTAINER VESSEL
DRY	DRY CARGO LINER
BC	BULK CARRIERS
AHTS	ANCHOR HANDLING TUG SUPPLY VESSEL
SV	SUPPLY VESSEL
GC	GAS CARRIERS
DRB	DUMB PONTOON BARGE
PASS	PASSENGER CUM CARGO
PSV	PLATFORM SUPPLY VESSEL
CHT	CHEMICAL TANKER
LPGT	LPG TANKER
PGER	PASSENGER SERVICE

Freight Rate

Baltic Dry Index [6] is a key indicator used in the shipping industry to assess the cost of transporting raw materials and other commodities by sea. Both annual and monthly trend, have exhibited decline in FY 2024 and in recent month to drop to lowest since October 2023 to 1,556 in November 2024 indicating moderating demand for shipping, which could signal a slowdown in global economic activity.



Sources: CMIE Industry Outlook



[6] It captures the cost to ship raw materials across more than 20 routes around the globe route.The index is a composite of three sub-indices that measure different sizes of dry bulk carriers: Capesize, which typically transport iron ore or coal cargoes of about 150,000 tonnes; Panamax, which usually carry coal or grain cargoes of about 60,000 to 70,000 tonnes; and Supramax, with a carrying capacity between 48,000 and 60,000 tonnes. The Baltic Dry Index takes into account 23 different shipping routes carrying coal, iron ore, grains and many other commodities.

Demand Landscape: Growth of Maritime Trade in India

Strategic Positioning of India and Gujarat for Shipping and Logistic: India's favorable position in the Indian Ocean and the eastern hemisphere makes it important for world shipping routes and most of the cargo ships sailing between America, Europe, Africa, and East Asia pass through Indian territorial waters. India's strategic positioning not only results in rise in cargo traffic but also increases the demand for additional services and ship repair facilities. Amongst the coastal states, Gujarat has the advantage of a vast hinterland covering the Northern and Central Indian States and as a result, there is high demand for the services offered by the non-major ports in Gujarat. The participation of the private sector has been a significant contributing factor in the development of non-major ports in Gujarat.

Privatization of ports facilities and services are gaining momentum.

Rising demand for port infrastructure and management has led to privatization of these facilities and services. Traditionally, most ports across the globe are managed by public sectors. However, lack of resources and improper management has slowed down the process leading to public private partnerships (PPP) increasing. Currently, there are 46 PPP projects operational in India at the major ports which are collectively valued at USD 4.5Bn.

The Ministry of Ports, Shipping, and Waterways (MoPSW) has launched a transformative infrastructure development initiative aligned with the 2047 Vision. Signifying a new era for Deendayal Port Authority (DPA), Kandla, a monumental Rs. 100 billion Memorandum of Understanding (MoU) has been inked between DPA, Kandla, and Umeandus Technologies India Private Limited. This strategic partnership aims at revolutionizing transportation and logistics infrastructure, focusing on handling Bulk, Break-bulk, and Container cargo. The project is set to elevate the port's capacity to an impressive 300 million metric tons or beyond, ensuring both commercial viability and environmental sustainability. This forward-looking endeavor is poised to generate employment opportunities for a significant workforce, providing jobs for at least 1,000 skilled and non-skilled staff, along with 10,000 during the construction phase.

'Vision 2047' by dignitaries from the Gujarat Maritime Board (GMB). Aligned with India's Amrit Kaal Vision 2047 and Maritime India Vision 2030, this transformative document signifies a leap forward for Gujarat's maritime sector. The Vision 2047 roadmap outlines strategic goals across short-term, mid-term, and long-term objectives, emphasizing growth and sustainability. Initiatives include organizational restructuring, port modernization, green initiatives, digital transformation, and maritime education. The plan also involves Greenfield port projects and aims for ultra-mega port status, reflecting a holistic approach to sustainable growth and technological advancement in the maritime sector.

One of the most successful privatization venture of ports has been the Adani operated Mundra port, which is India's first private port and is the largest container and commercial port in the country. Adani Group now operates 13 other domestic ports in eight different states and has equipped these ports with latest infrastructure and efficient cargo handling capacity.

Multi-product port-based Special Economic Zone to boost FDIs.

A special economic zone (SEZ) is a geographically limited area where the business and trade laws are different from the rest of the country. There is difference in tax laws, duty-free benefits, labour regulations and much more so that businesses operating in these areas can produce and trade goods at a lower price giving them the competitive edge at a global level. These economic zones are created to attract more foreign direct investment (FDIs).

In August 2022, Minister of Road Transport and Highways Mr. Nitin Gadkari, Minister of Ports, Shipping & Waterways and Ayush, Mr. Sarbananda Sonowal, and Minister of State for Road Transport & Highways, Gen (Retd) VK Singh signed a tripartite agreement for swift development of modern Multi Modal Logistics Parks (MMLP) under Bharatmala Pariyojana across the country.

The multi-product port based SEZ has been in operation at JNPA, India's largest major port, since June 2020. 45 plots have been allotted comprising 250 Acres of land, with 9 units and 1 Free Trade Warehousing Zone (FTWZ) already in operation. These operational units are engaged in diverse sectors such as warehousing, food processing, manufacturing, and trading.

The Shipping Ministry of India are working to reach 80% landlord port model at major ports by 2030 to increase efficiency and reduce logistic costs. In this model, private players can take over the operational aspects at these ports.

Industrial growth to boost EXIM business leveraging the Indian Shipping Industry

India is being established as a global manufacturing hub through various government policies and incentives to boost the manufacturing sectors. The 'Make in India' initiatives is facilitating this development. The Indian manufacturing industry generates around 17% of India's GDP and is projected to be one of the fastest growing sectors. With the advancement of industrial growth, exports and imports through ports are bound to be increase. Rise in imports and exports will in turn boost the shipping industry. Indian ports have more cargo traffic capacity than what is being utilized. Although congestion and turnaround time are affecting the traffic, development on economy can further boost maritime transport and increase revenue.

Trade collaborations with other countries

Trade Collaboration with other countries for economic partnerships and free trade agreements (FTAs) may have impact on import and export trends of the country. India has entered into a Trade and Economic Partnership Agreement (TEPA) with European Free Trade Association (EFTA) countries comprising

Switzerland, Iceland, Norway & Liechtenstein in May 2024, which will have significant impact on India's export capabilities. The FTAs will provide a window to Indian exporters to access large European and global markets. Under this agreement, EFTA bloc has made a binding commitment of USD 100 billion investment and 1 million direct jobs in the next 15 years. India has also 13 Regional Trade Agreements (RTAs)/Free Trade Agreements (FTAs) with various countries/regions namely Japan, South Korea, countries of ASEAN and SAARC region such as Mauritius, United Arab Emirates and Australia.

Rising cargo traffic increasing demand for auxiliary services

Development of minor ports by improving infrastructure and its connectivity with major ports is increasing cargo traffic in minor ports at a growth rate higher than that of major ports. This in turn increases demand for auxiliary services at the minor ports. The demand for auxiliary services has been increasing in ports with high cargo traffic as major port companies could outsource the non-important services and focus on managing the cargo. The auxiliary services include storage and warehousing, maritime cargo handling services, customs clearance services, transportation services, etc.

Key threats and challenges to India's Maritime Trade

Inland Waterways and Coastal Shipping Under-Utilization Impacting Country's Potential

Inland waterways integrated with coastal waters can provide for a significant transportation system. The inland waterways which can be navigated throughout the year in India makes up 14,500 km length of rivers. The authority that looks after the projects and management of the inland waterways is Inland Waterways Authority of India (IWAI), an autonomous body under MoPSW and State Agencies.

Despite inlands waters and coastal waters being a cost-effective and efficient mode of cargo transportation, its utilization is considerably low in comparison with developed countries. Also, over the years the use of these inland waterways has decreased due to losses incurred by companies as well as not maintenance by the regulatory authorities.

Under the Sagarmala project and Jalmarg Vikash Project, infrastructure development on the 5 National Waterways (NW1,2,3,4 and 5) and the 106 navigable rivers have been declared by the government. India and Bangladesh have agreed upon a river transportation protocol of 2,303 nm on the river routes of Ganga, Brahmaputra, and their tributaries across the two countries. Similar protocols are to be signed between India and Bhutan, Nepal, and Myanmar.

Need for Technological Advancements and Integration

India is far behind in integration of technology within major as well as minor ports. Digitalization of the maritime industry using artificial intelligence (AI) and blockchain are changing the way the shipping

industry operates. Use of AI to reduce port congestion or to improve coordination and security should be implemented at ports. However, due to lack of finances, information and regulatory challenges, implementation of technology has become a hindrance at Indian ports.

Use of technology to analyze potential failures improves the scope to take corrective measures is something that the Indian ports are lacking in. The stakeholders involved in the shipping industry should be conscious of the changing landscape for India to compete with the top shipping nations of the world.

Sustainability, Decarbonization and the Regulatory Challenges that Come with it.

The amount of greenhouse gases in the atmosphere due to industrial evolution has led to an increase in sea level, heavy rainfall, terrestrial and marine heatwaves, and cyclones. These events pose a significant threat to coastal regions and India's port infrastructure and operations.

Decarbonization pledge taken by the government has increased restrictions on smaller shipping companies as they must pay a hefty sum for violations. Indian Ports need to be in adherence to the International Marine Organization's alignment to 9 UN SDGs which includes obligations on safe, efficient, and sustainable ports but the infrastructure at these ports is not equipped for it, affecting the market players and increasing their costs.

Competition from Foreign Players Affecting Indian Shipping Companies

Economic security and the shipbuilding industry have crucial connections. For shipbuilding, most of the components such as propellers, marine gas turbines, high-capacity main engines, shafting, gearboxes, high-capacity diesel generators, and control systems are imported. This adversely affects the domestic industry. Also, Indian shipbuilders face longer construction cycles and are not able to meet demands promptly and other shipbuilding nations pose significant competition for Indian shipbuilders.

Ultra-Large and Large Vessel Size Affecting Their Entry into Indian Port Harbors

Most port harbors in India aren't equipped with the right infrastructure to handle large vessels as the draft size of these harbors aren't deep enough to handle them. JNPA and Mundra port are well-equipped for large vessels but were not able to accommodate the world's largest box ship, Ever Alot. Vizhinjam Port in Kerala is a deep-sea facility; however, it is expected to become commission in December 2024. Although the ultra-large vessel fleet comprises only 0.7% of the total operational global fleet, they are vital to the trade between Europe and China, the route that India can be part of.

The minor ports have a similar scenario with large ships as their entry into the harbors could become a problem. Lightering these ships using adequate lighterage services can be very beneficial as the ports will not be losing revenue and the pollution and congestion can also be controlled.

Lighterage, Stevedoring and Cargo Management Services

Lightering: Lightering, also known as lighterage, is the process of transferring cargo from one vessel to another, typically from a larger "mother" vessel to a smaller vessel such as a barge or mini bulk carrier (known as "Daughter vessel"). This STS (ship-to-ship) transfer method is used to load or unload cargo efficiently, allowing larger vessels to offload some of their cargo to navigate shallower waters or reach ports with draft restrictions.

Economical shipment of commodities like coal, sulphur, per-coke and iron-ore requires the use of large bulk carriers. When ports are too shallow to accommodate large carrier vessel, have a narrow entrance or have a major tidal variation, lighterage services allows offshore loading and unloading of the cargos into smaller vessels such as barges or mini bulk carriers.

The process of lighterage is provided below:

1. **Positioning of Mother Vessel:**

The large bulk carrier is positioned offshore, in deeper water where it can safely load or discharge cargo. The vessel anchors or is moored at a designated lighterage area, typically several nautical miles from the port, where the water depth is sufficient for large ships but too shallow for direct access to the port.

2. **Approaching the Mother Vessel:**

Daughter vessels (i.e, barges or mini bulk carriers) approach the Mother vessel. Daughter vessels are either tugged into positions with the help of motor tug boats or maneuvered manually depending on weather and sea conditions. The Daughter vessel is carefully positioned alongside the Mother vessel. The approach is controlled to avoid damage to either vessel.

3. **Cargo Transfer:**

After successful approach and positioning of both vessels, cargo is then transferred from the Mother vessel to the Daughter vessel in an efficient and controlled manner. Cargo is typically loaded using Daughter vessel's Floating cranes and grabs. As the cargo handling capacity of Mother Vessel is much higher than of the Daughter vessel, multiple Daughter vessels may be involved in the transfer of cargo, making several trips back and forth. This cycle continues until the bulk carrier has discharged its entire load.

4. Transporting Cargo to Shore:

Once the Daughter vessel is loaded, it departs from the large bulk carrier and heads toward the port. The Daughter vessel follows a designated route to reach the port, ensuring that the cargo is safely transported through the shallow waters.

5. Discharge at the Port

Upon arrival at the port, the Daughter vessel docks at a berth that is designed to accommodate smaller vessels. The cargo is offloaded from the Daughter vessel using shore-based unloading equipment, such as cranes, grab buckets, or other material handling machines.

6. Return of Daughter Vessel

After unloading, the Daughter vessel returns to the offshore location to collect additional cargo from the Mother vessel. This cycle continues until the bulk carrier has discharged its entire load.

Stevedoring: It refers to the process of loading and unloading cargo from a vessel to or from a dock or port using specialized equipment. Stevedores are the personnel or companies responsible for physically handling and transferring cargo between the ship and the port facilities, ensuring that it is stored or placed securely. This activity is done at the port, often involving earth moving equipment including excavators, material handling machines, pay loaders and tippers to move goods to storage facilities or transport vehicles.

Stevedoring can involve both manual labor and the use of earthmoving equipment such as excavators, material handling machines, pay loaders and tippers, and other machinery to move cargo efficiently. Stevedoring services seek to minimize port time and ensure the safety of cargo and ship.

For the shipping company and the ship, runtime at the sea is profitable when it is carrying cargo between ports but while docked at the port, delays contribute to downtime and add to the operating costs of the ship. Accordingly, our Company aims to minimize the port time of our customer’s ships, and we continually aim to work efficiently toward faster turnaround times for our operations. Further, Safety and security of cargo and the ship is an essential part of our stevedoring services.

Stevedoring also include Onboard stevedoring. Onboard stevedoring refers to the process of cargo handling, loading, and unloading directly on a ship while it is still at sea. Onboard stevedoring plays a vital role in the shipping industry, particularly for dry bulk cargo. It involves managing the loading, unloading, and secure stowing of cargo within the ship, often with specialized equipment and techniques. Ensuring efficiency and safety during onboard stevedoring requires careful planning, skilled labor, effective equipment, and strict adherence to safety regulations.

Other cargo management services:

a) **High heaping:** High heaping refers to practice of stacking or piling of Dry Bulk Cargo higher than usual in a storage area. This is often done to maximize the use of available space in areas or where there is a high volume of cargo to store in a short amount of time. The piles of cargo can be several meters high, depending on the type of material and the capacity of the storage facility. Cargo is often piled using machinery like stackers, bulldozers, or front-end loaders, with the material being carefully stacked to create a high, stable heap.

b) **Railway rake handling:** Railway rake handling refers to the operational procedures involved in managing and moving a series of connected or that transport bulk commodities. A railway rake typically consists of multiple railcars connected to each other. Bulk commodities are loaded onto the train at designated area with the help of specialised equipment such as loaders or cranes. Railway rake handling often works as part of a larger logistics network, involving connections to trucks, ships, or barges for the final delivery of goods.

c) **Water sprinkling:** Water sprinkling in the context of bulk cargo handling, especially for dry bulk materials such as coal, cement or minerals, refers to the controlled application of water onto the cargo to achieve various objectives including to manage dust, prevent spillage, and control the temperature of stored or transported materials. Water sprinkling significantly improves operational efficiency, reduces health risks, and ensures smoother handling of dry bulk materials.

d) **Liaison with authorities:** Liaison with authorities refers to the process of communication and coordination between customer, port operators, freight forwarders, importers, exporters, and customs officials to ensure the smooth flow of goods. This liaison is vital to ensure compliance with applicable laws, enabling timely and efficient movement of cargo. Our role as a liaison with customs authorities involves several key activities, including ensuring compliance with applicable laws, facilitating the clearance of shipments and managing documentation of importing/exporting cargo.

Role in Overall Shipping

Lighterage in India is mainly confined to three regions - Gujarat, Mumbai Harbor and Kolkata. Lighterage industry is highly competitive with organized, established market players dominating the sector. Specific ports in these states are allocated for lighterage services and are called lighterage ports. Modernization of ports could affect lighterage services, however, stevedoring and barging services would boost with the increase in cargo traffic. Right steps need to be taken by regulatory authorities to maintain the lighterage industry as the prospects that come with digitalization, modernization and increase in costs could affect the industry.

Stevedoring industry is a requirement in all ports across the country as the mechanization of onloading and offloading is still not advanced enough. Also, the ports do not have enough labour or processes in place to

carry out these activities by themselves. Thus, these activities are outsourced to companies specializing in it. The rates and the labour requirement are specified to the stevedoring companies by the Dock Labour Board (DLB) of each port. Adequate infrastructure is crucial for stevedoring activities as small delays due to improper time management could lead to huge demurrage charges implemented by the port.

Current scenario & growth forecast of Lighterage Services –

Gujarat

Ports like Magdalla, Navlakhi, Bedi among others are considered as lighterage ports in Gujarat as the loading and offloading are dependent upon barges. In FY 2023, the cargo traffic by the above three ports port stood at 55.88 lakh tonnes, 38.19 lakh tonnes and 31.82 lakh tonnes, respectively. Lighterage services in Gujarat is highly concentrated market.

Emergence of modern port such as Mundra in Gujarat could affect lighterage cargo by implementing sophisticated cargo handling facilities. Infrastructure development of lighterage ports and implementation of such cargo handling facilities to handle large vessels at the port could negatively affect the lighterage industry in the upcoming years.

Mumbai Harbor

The region of Mumbai Harbor consists of Mumbai Port, Jawaharlal Nehru Port and various captive jetties and minor ports located in Dharamtar, Dahanu, Uran etc. where the lighterage services has been in place since 1952. Chemical lighterage at Mumbai Harbor is the most prominent lightering that takes place, along with dry bulk cargo lighterage. Like Gujarat, Mumbai Harbor is also highly competitive and concentrated. Lighterage activities at Mumbai Harbor are not expected to be affected much in the coming decade as the port congestion remains high all the time. There has already been implementation of cargo handling facilities at the JNPA port, but the high incoming traffic has led to diversion of the vessels to the nearby ports for lighterage activities.

Kolkata

Lighterage activity in Kolkata, especially at Haldia Dock System, is being carried out consistently since October 2021. For the first time in October 2021, Kolkata Port successfully handled ship-to-ship (STS) lighterage operation of Liquid Petroleum Gas (LPG) of BPCL at Sandheads. The STS lighterage operation saved time by 7-9 days and USD 3,50,000 was saved per voyage.

During FY 2023, SMP Kolkata engaged in 21 vessel operations involving ship-to-ship transfers, with a total tonnage of 5,44,945. Additionally, they completed 76 lighterage operations amounting to 33,50,399 tonnes. The instant STS operations are expected to open new business potentials for Kolkata port lighterage services as well as the trade in the country in terms of saving substantial foreign exchange.

Regulatory Analysis

Analysis of regulatory factors governing India's maritime trade sector

Custom law governs the import and export, trade regulations, and collects tax on the import and export of goods that move into and from India respectively. The key laws include the Customs Act, of 1962 and the Customs Tariff Act, the Foreign Trade (Development and Regulation) Act, of 1992.

The Customs Act, of 1962 and the Customs Tariff Act, collect customs duties on export and import. The Customs Act also governs the import and export of cargo, baggage, postal articles, arrival and departure of vessels, etc. It also prohibits and restricts imports and exports under various legal enactments.

Under the Foreign Trade Act, the central government can make provisions for the development and regulation of foreign trade. Foreign Trade Policy, 2015-20 provides these provisions currently.

These laws can have an impact on the efficiency and cost of maritime trade.

Directorate General of Shipping

Ministry of Ports, Shipping and Waterways, Govt. of India exclusively controls shipping in India. The Directorate General of Shipping (DG Shipping) is a semi-autonomous statutory body set up by the Ministry of Shipping. DG of shipping handles all matters relating to merchant shipping and the implementation of regulations of the International Maritime organization. Indian shipping act falls under DG of shipping.

Indian Shipping Act, 1958, stands as the primary legislation governing merchant shipping in India which deals with aspects of merchant shipping such as such as the registration of ships, sailing vessels, and fishing vessels the safeguarding and protection of passengers and cargo carrying ships, the regulation of Indian ships and ships involved in the coasting trade, collisions, the prevention and control of marine oil pollution from ships, and the restrictions on shipowners.

In 2020, the merchant shipping bill, 2020 was promulgated to amend this act to ensure compliance with the country's obligation under the maritime treaties and International Instruments and efficient maintenance of Indian mercantile marine in a manner best suited to serve the national interest.

Major Port Trusts

Major Ports Trust Act 1963 was established to govern all major ports. Tariff Authority for Major Ports (TAMP) was established as an amendment to the Major Port Trust Act in 1997 to provide for an independent Authority to regulate all tariffs, both vessel-related and cargo-related, and rates for the lease of properties in respect of Major Port Trusts and the private operators located therein.

Major Ports Authorities Act, 2021 This law replaced the Major Port Trusts Act, 1963 in 2021. This act provides for the regulation, operation, and planning of Major Ports in India and vests the administration, control, and management of such ports upon the Board of Major Port Authorities. This law provides freedom to major ports to fix their tariffs and scrap the Tariff Authority for Major Ports.

Indian Port Act

All the Minor Ports are governed under the Indian Port Act, of 1908, and are owned and managed by the State Governments. This act has provisions for rules for shipping safety and conservation of ports, port dues fees, and other charges, and respect to penalties.

The draft bill to replace this 110-year-old act is proposed in 2022 as Indian Ports Bill, 2022. The act is modified to reflect the present-day frameworks, incorporate India's international obligations, address emerging environmental concerns, and aid the consultative development of the ports sector in the national interest.

International Convention

India has signed multiple international maritime conventions and agreements. These include conventions governed by the International Maritime Organization (IMO). International Maritime Organization (IMO) is a United Nations agency that develops rules on aspects such as safety, security, and pollution prevention.

These international obligations significantly influence India's regulatory framework, necessitating periodic amendments to align with global standards. International Cooperation Division of the Ministry of Ports, Shipping and Waterways deals with maritime engagements with foreign maritime nations, and all matters related to the International Maritime Organization.

Flagship policies to develop India's shipping industry.

Sagarmala program

To drive the transformation of India's maritime sector The Ministry of Ports, Shipping, and Waterways has taken its flagship initiative, The Sagarmala Programme. It was approved in March 2015. It seeks the reduction of logistics costs of international and domestic trade with minimal infrastructure investment.

Projects under Sagarmala are divided into 5 pillars which are:

- Port-led industrialization
- Coastal community development
- Coastal shipping and IWT
- Port modernization
- Port connectivity

Overall, 839 projects worth investment of USD 92 Bn for implementation by 2035 out of which, 262 projects worth USD 22 Bn have been completed, and the remaining projects are in various stages of implementation.

Policies to boost productivity under the Sagarmala initiative:

- **Berthing policy:** The new berthing policy came into effect from August 2016. This policy gives a framework of norms that could reduce berthing time and improve efficiency at ports.
- **Stevedoring policy:** The new stevedoring policy came into effect from July 2016. Under this policy, stevedoring and shore handling of vessels in major ports may be carried out by a single agency, as far as possible.

Maritime India Vision 2030

The Maritime India Vision 2030 was launched in 2021 to provide the blueprint for accelerated and coordinated development of India's maritime sector and to take a lead in the global maritime industry. Through significant consultations with private and public stakeholders, it has identified 150+ initiatives across ports, shipping, and waterways subsector. 150+ initiatives across 10 themes will cover all the facets of the Indian maritime sector. The themes are:

1. Develop best-in-class Port infrastructure.
2. Drive end to end Logistics Efficiency and Cost Competitiveness
3. Enhance Logistics Efficiency through Technology and Innovation
4. Strengthen Policy and Institutional Framework to Support all Stakeholders.
5. Enhance Global Share in Ship Building, Repair and Recycling
6. Enhance Cargo and Passenger Movement through Inland Waterways
7. Promote Ocean, Coastal and River Cruise Sector
8. Enhance India's Global stature and Maritime Co-operation
9. Lead the World in a Safe, Sustainable & Green Maritime Sector
10. Become the Top Seafaring Nation with World Class Education, Research & Training

MIV 2030 envisions an overall investment of INR 3,00,000-3,50,000 Cr across ports, shipping, and inland waterways categories.

Maritime Amrit Kaal Vision 2047

The Amrit Kaal Vision 2047 was announced at the third edition of the Global Maritime India Summit 2023. This vision, formulated by the Ministry of Ports, Shipping & Waterways, builds on the Maritime India Vision 2030 and provides a broader road map for Indian maritime sector transformation.

Amrit Kaal Vision sets a larger vision aiming development of world-class ports and promoting inland water transport, coastal shipping, and a green and sustainable maritime sector. It encompasses aspirations in Logistics, Infrastructure, and Shipping, supporting India's 'Blue Economy'. The vision identified 300 actionable initiatives for enhancing ports, shipping, and waterways through over 150 consultations with various stakeholders and the analysis of 50 international benchmarks.

The 11 key themes on which the action plan is based are:

1. Lead the World in a Safe, Sustainable & Green Maritime Sector
2. Promote Ocean, Coastal & River Cruise Sector
3. Enhance the modal share of coastal shipping & Inland Water Transport
4. Promote Maritime Cluster
5. Promote maritime professional services.
6. Become a global player in Shipbuilding, repair & recycling.
7. Develop World Class Education, Research & Training
8. Strengthen India’s global maritime presence.
9. Develop World Class next generation ports.
10. Enhance Efficiency through Technology & Innovation
11. Enhance India’s Tonnage

Jal Marg Vikas Project (JMVP)

Jal Marg Vikas Project is an initiative taken by the Inland Waterways Authority of India (IWAI) under the Ministry of Shipping for the development of inland waterways in India. This was implemented to reduce dependence on rail and road transport of goods to reduce congestion and carbon emission. The states covered under the Jal Marg Vikas Project are Uttar Pradesh, Bihar, Jharkhand, and West Bengal. JMVP was approved in January 2018 and is expected to complete by 2025. The total cost of the project is USD 800 Mn.

Jal Marg Vikas Project was implemented with the following goals:

1. To provide an alternate mode of transport that is environment-friendly and cost-effective.
2. To bring down the logistics cost in the country.
3. Development of Mammoth Infrastructure which includes the multi-modal and inter-modal terminals, ferry services, navigation aids and roll on – Roll off (Ro-Ro) facilities.

4. To develop the socio-economic condition of India for huge employment generation

- **India-Middle East-Europe Economic Corridor (IMEC)**

The India-Middle East-Europe Economic Corridor (IMEC) was announced in September 2023 to unite the EU and seven other countries, namely India, the US, Saudi Arabia, the United Arab Emirates (UAE), France, Germany, and Italy. The proposed IMEC will consist of railroad, ship-to-rail networks and road transport routes extending across two corridors -

- The East Corridor – connecting India to the Arabian Gulf
- The Northern Corridor – connecting the Gulf to Europe

The IMEC corridor will also include an electricity cable, a hydrogen pipeline and a high-speed data cable. The ports that are to be connected are:

- India: Mundra (Gujarat), Kandla (Gujarat), and Jawaharlal Nehru Port Trust (Navi Mumbai)
- Middle East: Fujairah, Jebel Ali, and Abu Dhabi in the UAE as well as Dammam and Ras Al Khair ports in Saudi Arabia
- Railway line will connect Fujairah port (UAE) to Haifa port (Israel) via: Saudi Arabia (Ghuwaifat and Haradh) and Jordan
- Israel: Haifa port
- Europe: Piraeus port in Greece, Messina in South Italy, and Marseille in France

Objective of the project:

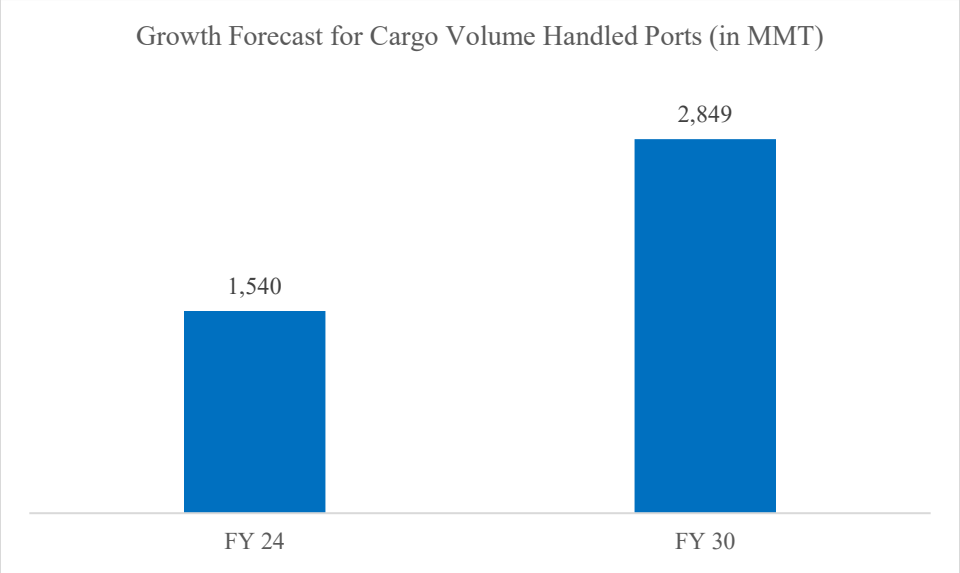
- It aims to create a comprehensive transportation network, comprising rail, road, and sea routes, connecting India, the Middle East, and Europe
- It aims to enhance transportation efficiency, reduce costs, increase economic unity, generate employment, and lower Greenhouse Gas (GHG) emissions.
- It is expected to transform the integration of Asia, Europe, and the Middle East by facilitating trade and connectivity.

Implications:

- IMEC is seen as a potential counter to China's Belt and Road Initiative (BRI) in the Eurasian region. It can serve to counterbalance China's growing economic and political influence, especially in regions with historically strong ties to the U.S.
- IMEC presents a transformative opportunity for India to boost economic growth by enhancing its trade connectivity with key regions. The route could significantly reduce transit times, making trade with Europe 40% faster compared to the Suez Canal maritime route.

Growth Outlook

The Indian port sector is on a robust growth trajectory, underpinned by the nation's burgeoning economy, rising industrialization, and government initiatives to enhance trade facilitation. The substantial growth from 1,540 MMT in FY24 to 2,849 MMT by FY30 is projected, implying a CAGR of 10.8%. This robust growth signifies a positive outlook for the sector and its pivotal role in India's economic development.



Source: Maritime India Vision 2030, D&B estimates

Several factors are propelling the growth in cargo handled volume at Indian ports. Firstly, the government's emphasis on infrastructure development, including port modernization and expansion, is enhancing port capacity and efficiency. Secondly, the 'Make in India' initiative is stimulating domestic manufacturing and exports, leading to increased cargo movement. Thirdly, the growing e-commerce sector is driving demand for efficient logistics and port services. Lastly, India's strategic geographic location as a trade and transit hub is attracting significant cargo volumes.

Bulk Commodities Dominate

The backbone of cargo volume growth in Indian ports is the movement of bulk commodities. Iron ore, coal, and petroleum products form the core of this segment. These commodities are essential inputs for various industries, such as steel, power generation, and transportation. As India's industrialization accelerates, the demand for these raw materials is expected to rise, thereby driving the growth in bulk cargo handling.

Containerized Cargo on the Rise

While bulk commodities are the traditional drivers, the containerized cargo segment is witnessing rapid expansion. This growth is fueled by the increasing globalization of the Indian economy. Rising exports of manufactured goods and imports of consumer products are leading to a surge in container traffic.

Additionally, the growth of e-commerce has further boosted the demand for efficient containerized transportation.

Enhancing Hinterland Connectivity

To maximize the potential of the port sector, the Indian government is investing heavily in improving hinterland connectivity. This involves the development of rail, road, and inland waterway infrastructure to facilitate seamless movement of cargo between ports and the hinterland. By reducing transportation costs and time, enhanced connectivity will stimulate trade, increase cargo volumes, and reduce logistics costs for businesses.

In essence, a combination of factors is driving the growth of cargo handled at Indian ports. The robust demand for bulk commodities, the expansion of the containerized cargo segment, and the government's focus on hinterland connectivity are collectively propelling the port sector towards new heights.

Growth Forecast for Total Cargo Handled in Gujarat Ports

Gujarat, India's western maritime gateway, has witnessed a meteoric rise in cargo handling over the past decade. The state's strategic location, coupled with a robust infrastructure and government initiatives, has positioned its ports as pivotal hubs for both domestic and international trade.

A substantial growth trajectory for Gujarat's ports is witnessed over the years. **Total cargo handled is expected to surge from 317.2 MMT in FY'24 to a projected 720 MMT by FY'30.** This represents a CAGR of approximately 17.5%. Such a growth rate underscores the immense potential of Gujarat's port sector and its ability to drive economic development.

Several factors are propelling this remarkable growth. Firstly, the government's ambitious Sagarmala project, aimed at enhancing port infrastructure and connectivity, is a key catalyst. The project's focus on modernization, expansion, and hinterland development has significantly improved the efficiency and capacity of Gujarat's ports. Secondly, the burgeoning manufacturing and industrial sectors in the state, particularly in petrochemicals, automobiles, and textiles, have fueled the demand for cargo handling services. Thirdly, Gujarat's strategic location as a trade corridor between India and the Middle East, Africa, and Europe has made its ports attractive transshipment hubs.

Looking ahead, the growth momentum in Gujarat's port sector is expected to persist. Several ongoing and planned infrastructure projects, including the development of deep-water berths, container terminals, and rail and road connectivity, will further enhance the ports' capacity and efficiency. Moreover, the government's emphasis on coastal economic zones and industrial corridors will create new opportunities for cargo movement.

However, challenges such as port congestion during peak periods, environmental concerns, and global economic fluctuations could pose risks to the projected growth. Effective port management, sustainable practices, and diversification of cargo types will be crucial to mitigate these challenges.

In conclusion, Gujarat's ports are poised for continued robust growth, driven by supportive government policies, robust infrastructure development, and increasing trade volumes. The projected increase in cargo handling from 317.2 MMT in FY'24 to 720 MMT by FY'30 signifies the state's emergence as a global maritime trade powerhouse.

Inland Water Transportation: Inland water transportation scenario in India

As per the Ministry of Ports, Shipping, and Waterways only 2% of transportation of bulk cargo like coal, iron ore, cement, food grains, fertilizer, etc. in India is contributed by Inland water transport. As per Maritime India Vision -2030, the government intends to increase this contribution by 5%.

National Waterways Act 2016 declared 111 waterways as national waterways which included 5 existing and 106 new waterways aiming to boost connectivity and transportation through waterways. These waterways have a combined length of total 20275 km. Out of 111, only 24 waterways are having cargo movement as per government data.

Haldia – Allahabad National Waterway 1 is the longest waterway that passes through 4 states which are Uttar Pradesh, Bihar, Jharkhand, and West Bengal. It spans 1620 km in length. In FY 2023-24, 12.82 MMT of cargo was transported through this waterway.

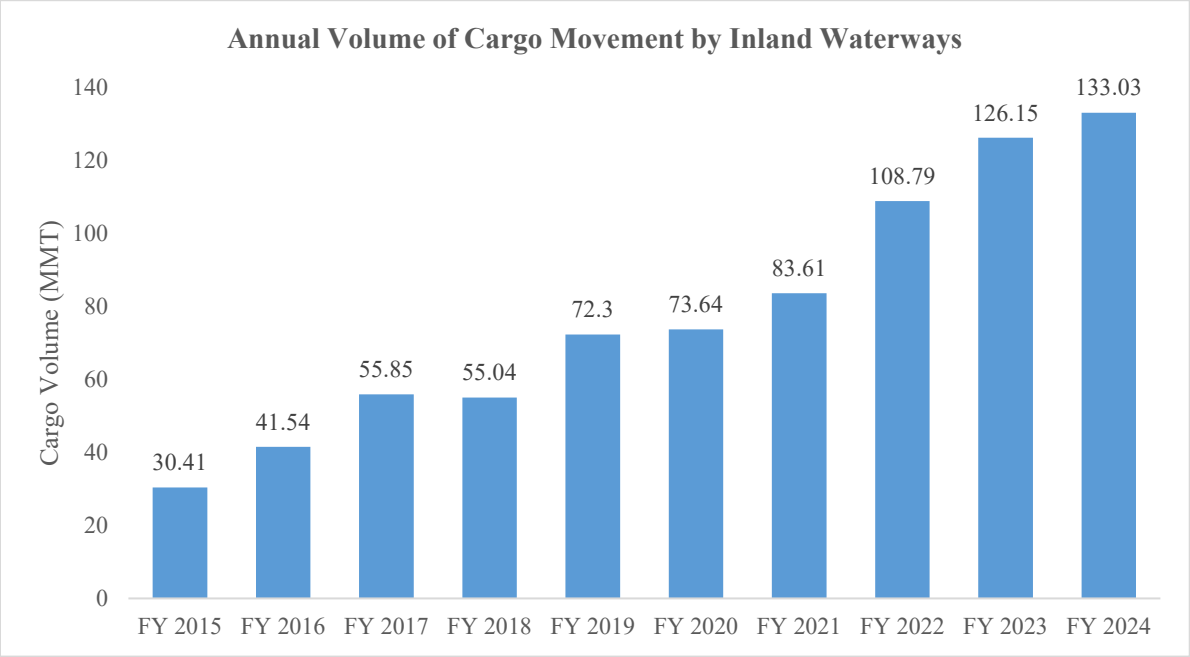
National Waterway 91(Shastri River - Jaigad Creek System) which is 52 km long and passes through Maharashtra state. A total of 37.05 MMT cargo was transported through it In FY 2023-24 consisting of major commodities such as iron ore fines, coal, cooking coal, etc. Which is higher than any other waterway. 88% of dry bulk cargo was transported through inland waterways followed by general cargo of 5 %, Rollon -Rolloff cargo of 3%, and liquid bulk of 2%.

Volume of cargo movement through inland waterways

The cargo movement through inland waterways has increased 700% between FY2014 and FY2023. Cargo transported by waterways in FY2023 was 126.2 MMT which was a remarkable surge from the 18 MMT transported in FY 2014. Further, the year-on year growth rate between FY2023 and FY2024 was 5.5% to reach cargo traffic of 133 MMT in FY2024.

The cargo movement through inland waterways in Maharashtra, Gujarat and Goa showed a steep rise. In Maharashtra, the cargo transported by inland waterways went up six times between FY2014 and FY2023, where it was 10.2 MMT in FY2014 and 63.1 MMT in FY2023.

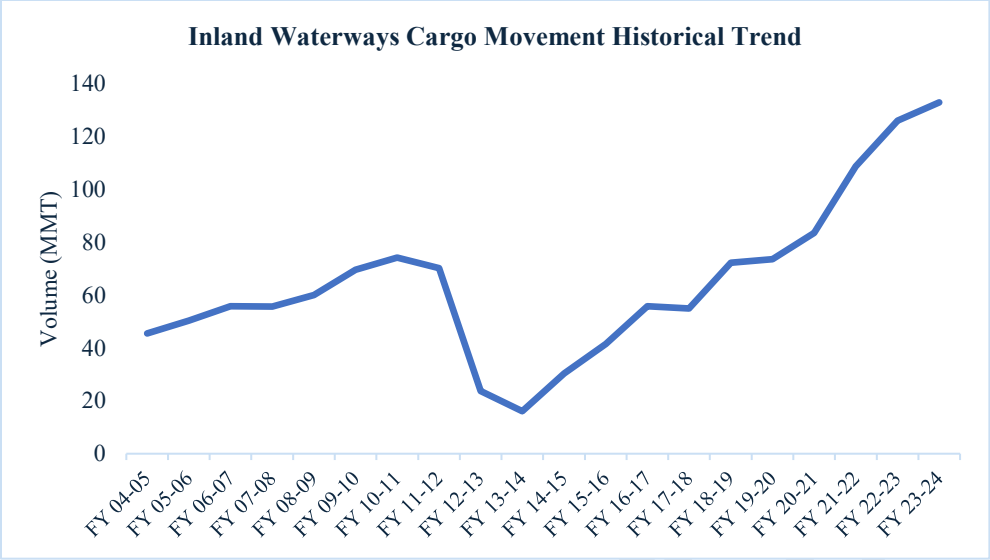
In Gujarat, the cargo transported by inland waterways reached 27.7 MMT in FY2023 compared to 11.5 in FY2018.



Source: Ministry of Ports, Shipping and Waterways

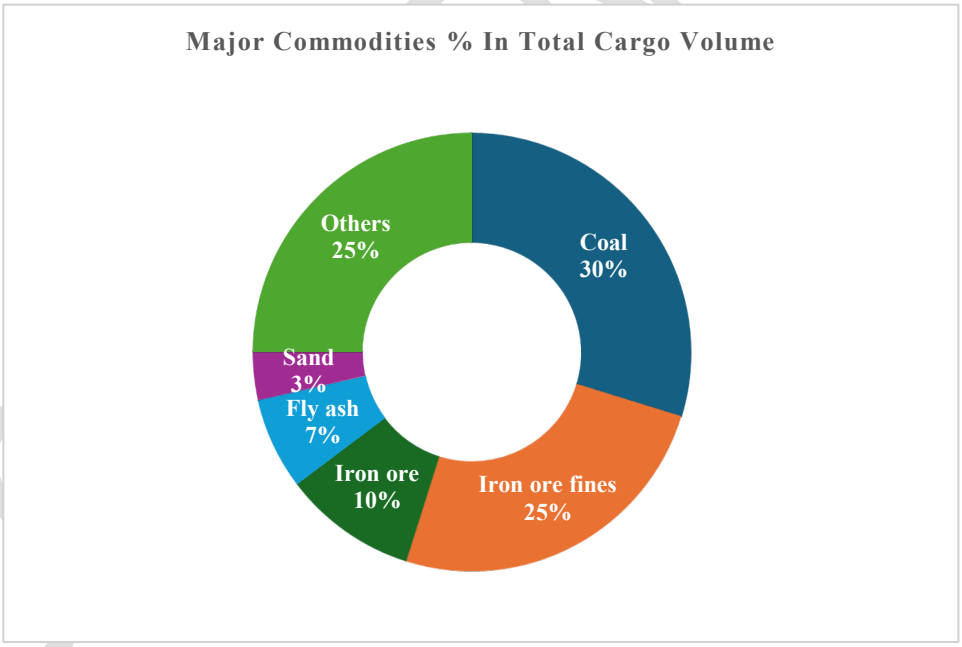
Historical trend of Cargo Movement on Inland Waterways

The total cargo traffic carried through inland waterways transport (IWT) has been on a rise since FY 2015. Before FY 2015, the investment made for IWT was very led which had led to a decline in cargo traffic. The investment spent on developing inland waterways in in India was only USD 250 Mn in 28 years between 1986-2014. Various projects such as Sagarmala, Maritime India Vision 2030, Jal Marg Vikas Project etc. were introduced after 2015 which has led to a boost in the cargo traffic through IWT and is expected to increase in the forecast years.



Source: Ministry of Ports, Shipping and Waterways

Major types of commodities transported through inland water network.



Source: Ministry of Ports, Shipping and Waterways

Key factors driving inland water transportation in India.

Environment: Inland water is a more environment-friendly mode of transportation compared to road and rail transport. The emission of Greenhouse gases by waterways is 0.0006 per Rs/TKm, by road is 0.0031 per Rs/TKm, and by rail is 0.0006 per Rs/TKm, that is emissions by waterways are 81% less than by road. It is also less polluting than rail and road transport. Air pollution by waterways is 0.03 per Rs/TKm, which

is 85% less than by road (0.202 per Rs/TKm), and 18% less by rail (0.0366 per Rs/TKm). The noise, soil, and water pollution are also negligible by water transport. Sustainable development in all areas is today's need and inland water transport plays a crucial role in India's vision toward green transport.

Cost-efficiency: The operating cost of vehicles in inland water transportation is also less. The cost of operating vehicles in waterways transportation is 0.843 Rs/TKm, in road transportation, it is 1.170 Rs/TKm, and in rail transportation, it is 1.009 Rs/TKm. Fuel requirement by waterways is 0.0048 Litre/TKm which is less than road transport (0.0313 Litre/TKm) by 85%, and less by rail transport (0.0089 Litre/TKm) by 46%. Inland water transportation is more fuel-efficient which translates to less logistics cost compared to other transports.

Government initiatives: In 2016, the government launched National Waterways Act 2016 declaring 111 waterways as national waterways which included 5 existing and 106 new waterways aiming to boost connectivity and transportation through waterways. In Maritime India Vision -2030, the government intends to increase the modal contribution of cargo movement by inland water transport from 2% to 5%. Also, The Ministry of Ports, Shipping and Waterways has considered a waiver of waterway user charges initially for a period of three years.

International Connectivity: Inland water transportation not only deals with domestic cargo but also international cargo from neighbouring countries such as Bhutan, Bangladesh, Nepal, and Myanmar. Movement between India & Bangladesh takes place under the Indo-Bangladesh Protocol on Inland Water on Transit and Trade Agreement which connects NW1, NW2, NW16 and NW97. The initiative has been taken for 7 new ports of call-in addition to the existing 6 on each side along with the addition/ extension of 2 waterway routes in addition to the existing 8 routes under this protocol between India and Bangladesh. Kaladan Multimodal Transit Transport Project was jointly identified by India and Myanmar to create a multi-modal mode of transport for the shipment of cargo from the eastern ports of India to Myanmar and it will provide alternate connectivity to the northeastern region of India and the rest of India.

Tourism: One of the key priorities of the Maritime India Mission 2030, is to promote cruise tourism including ocean, coastal and inland cruise tourism. Currently, there are 5 Key waterways with operational river cruises and additional 4 waterways are proposed for river cruise tourism. On January 13, 2023, the world's longest river cruise and waterways development projects were inaugurated, and the foundation stone was laid at Varanasi.

Policy/ regulatory factors impacting inland water transportation in India.

Inland Vessels Bill, 2021: This bill will regulate the safety, security, and registration of inland vessels. This bill is applicable all over India and union territories which will ensure seamless transportation by inland vessels. Mechanically propelled vehicles will have to get the certificate of survey under this bill. The term inland water extends to tidal water under this bill.

This bill also promotes the prevention of pollution by inland vessels by directing The Central Government to designate the list of chemicals, any ingredients or substance carried as bunker or as cargo, or any substance in any form discharged from any mechanically propelled inland vessel, as pollutants and prevents mechanically propelled inland vessel to cause pollution by discharging or dumping of such pollutants.

Growth forecast

By 2026, there is the potential to divert around 30,556 tonnes of traffic to IW while around 233,409 tonnes could potentially be diverted via roll-on roll-off (RoRo) cargo service. In 2035, around 210,419 tonnes could be diverted to IW and around 1,084,346 tonnes could be diverted to RoRo. With the integration of IW and RoRo services, there is the potential for GHG emissions savings of around 10 percent and 27 percent in 2026 and 2035, respectively.

In addition, with the adoption of newer technologies, fisheries could save up to 77 percent of their energy consumption by 2030 and fruits and vegetables could save up to 77 percent. Cold storage for potatoes could save up to 75 percent by shifting to improved technologies. The fruit and vegetable value chain could save about 38 percent in post-harvest refrigeration but could save up to 77 percent in transportation. The dairy value chain could save 83 percent of its energy demand by the end of 2030.

SWOT Analysis: Shipping Services Industry

Strengths

- The strategic geographical location of India plays a vital role in Global trade.
- The average Container Dwell Time has reached a level of 3 days only as compared to 4 days for countries like UAE and South Africa, 7 days for the USA and 10 days for Germany in 2023.
- Indian Ports "Turn Around Time" has reached 0.9 days which is better than the USA (1.5 days), Australia (1.7 days), Singapore (1.0 days) etc. in 2023.

Weaknesses

- Unavailability of skilled manpower for port operations
- Climate change and monsoons affect port operations and disrupt logistics.

Opportunities

- 100% FDI is allowed under the automatic route for projects related to the construction and maintenance of ports and harbors.
- India is seeking collaborators to explore alternate fuels under the green shipping initiative.

Threats

- Geopolitical tension such as the Red Sea crisis poses a threat to the Indian shipping industry.
- The rise in fuel prices impacts the cost of operating vehicles.
- Modernization of ports and increased operation cost has emerged as the most serious threat to Indian lighterage and barging industry.

Barge Transportation Scenario in India:

Barges are flat-bottom vessel that do not have a motor or engine, but are rather pulled by tugs, pusher boats or other vessels. Barges play an important role in keeping inland waterways running smoothly as they can transport cargo at a very low cost and reduce greenhouse gas emissions by almost 50% than rail and more than 800% by road. However, they are much harder to maneuver.

There are different types of barges that are used for specific purposes in the shipping industry. They also vary based on their size and the capacity that they hold.

Main Types of Barges Used in Shipping Industry:

1. **Dry Cargo Barges:** These barges are used to haul and ferry dry bulk cargo. Dry bulk cargo includes foodgrains, sand, minerals like steel and coal and other dry commodities.
2. **Deck Barges:** Deck barges are used to carry cargo like construction equipment, natural rock and stone, large metal pipes, and even livestock. These barges have a deck-like platform and can be docked for extended periods to act like a dry dock.
3. **Shale Barges:** These barges are constructed like deck barges with cargo bins/hoppers. They are used in transport of cargo from the drilling site in the oil and gas industry. These shale barges require clearance from the Ministry of Defence – Navy to operate.
4. **Split Hopper Barges:** This special type of barge is a hydraulically operated barge with a split open hull to carry loading and unloading of dredged material or any other construction material. Primarily, it is used for carrying dredged material as it is fitted with proper unloading tools.
5. **Ocean Barges:** Ships that can't make it to port due to size or shallow water use ocean barges to help transport cargo directly to land. Ocean barges are designed and constructed to withstand the elements of nature and are heavier than other types of barges.
6. **Floating Crane:** Also referred as crane ship, or crane barge., it is a ship with a crane that can lift heavy loads, typically over 1,500 tons. The largest floating cranes are used for offshore construction.
7. **Mini-bulk carrier:** A mini-bulk carrier is a small vessel carrier that are designed for river transport and are often built to pass under bridges. These vessels have a capacity of under 10,000 DWT and are used for carrying solid bulk cargoes like grains, coal, ore, cement, and fertilizers.

Role of Tugs in Cargo Movement

Tugs or tugboats are boats with high-power engine which can change easily and is used to pull large ships in and out of ports. Tugs are also used to pull barges, as barges do not have self-propulsion and tugs make it easier to navigate around inland waterways. The propulsion system of tugs is the main reason behind their enormous strength. The strength of tugboats is very critical for pulling barges as well as large ships.

Advancements in technology and immense research has resulted in development of high-powered tugs compared to the previous ones. In Indian ports, tugs are being hired and not owned by the ports to make better profits by decreasing operational costs. Major ports in India currently require tugs between 50-75 tonnes bollard pull for better maneuverability, compared to the 25-40 tonnes bollard pull used a few years ago. Small 10 tonne bollard pull tugs are also being used but these are mainly for barges, coastal vessels and for berthing 6,000-7,000 dwt palm oil carriers.

Providing end-to-end support in the operation of tugs has become primary for tugboat providers as reliability of tugs is of priority to the ports as well as for the vessels that are being tugged. In case of pulling large vessels as well as barges through the waterways, the projects are large-scale and continuous making it necessary for tugs to be designed by experts and be of high-quality.

But along with the reliability and high-power of tugboats, trained tugboat operators to operate these advanced tugboats are necessary. Few private companies providing tugboat services have set up training institutes to cater to the demand of skilled tugboat operators.

Current scenario & Historical growth of Barge and Tug segment in India

Barges were being used to carry goods before the industrial revolution when there were no vessels, and this was the only way to transport grains and other goods. Their demand had reduced in the past few years due to availability of advanced vessels. However, the demand for barges in India is on the rise in the past few years. The demand is mainly owing to Sagarmala project being taken up by the government to promote inland waterways.

Cost-efficiency is one of the primary reasons for the usage of barge. Although the number of barges being used is decreased, the tonnage of barges has increased over the years. This is mainly to reduce operational costs of transporting goods. Sustainability and decarbonization is another reason for the increase in use of barges. As countries are pledging to reduce carbon emissions, barge usage is expected to rise in the coming years. Although use of barges is restrictive for transporting goods in the sea, port-to-port transport of goods could be facilitated with appropriate measures from the regulatory bodies.

Lighterage activities are also being carried out using barges in ports such as Navlakhi, Veraval and Bedi. The loading and offloading of cargo from large vessels are carried out on barges are transported to ports. However, improvement in infrastructure at these lighterage ports could reduce dependence on barges.

Tugs –The demand for tugs is on a rise as ports in India are either upgrading or hiring higher power tugs to replace the low tonnage ones. Paradip Port currently has 6 tugs in place, 4 tugs with 50 tonnes bollard pull, 1 tug with 45 tonnes bollard pull and 1 tug with 60 tonnes bollard pull. The 50 tonnes bollard pull tug is for handling crude and product tankers of between 120,000 and 200,000 dwt at a designated jetty which is being developed close to the port's entrance channel for Indian Oil Corp (IndianOil).

The Jawaharlal Nehru Port Trust (JNPT), too, has signaled its intention to take on additional ASD tugs for handling the larger number of container carriers that will berth.

Many companies such as Temba Shipyards, Hindustan Shipyard, Vijai Marine Shipyards and Ocean Sparkle among others are leading manufacturers of tugs and supply these tugs to major ports as well as private ports for tugging of large vessels to the port area. Most of these companies have shifted to manufacturing tugs of 40-70 tonnes bollard pull as the demand for high-power tugboats have increased. However, companies such as Vijai Marine Shipyards are manufacturing 10 tonnes bollard pull for barges and small vessels.

Few market players are foreign companies who are supplying tugs to Indian ports, belonging to nations such as China and Singapore. Indian private players need to focus of reliability and providing end-to-end services to having a strong hold on the market. Training crew to operate advanced tugs is a challenge that the Indian ports and shipping industry will have to address over the years to come.

Penetration of barge transport in inland & maritime water transportation in India

Cargo movement on National Waterway-1 has witnessed significant growth in last decade. A growth of 152.8% in cargo movement has been achieved in 2023-24 (12.8 MMT) from 2014-15 (5.05 MMT). A robust growth at a CAGR of 10.9% has been witnessed in traffic movement on NW-1.

The major commodities transported through NW-1 includes fly ash, construction material, coal, food grains, general cargo, etc. Kolkata barge industry was formed primarily for the movement of jute from the interiors of the state to the harbor through river navigation for the purpose of exports. However, gradual decrease in jute exports has made significant impact over the industry resulting in the decline in the number of barges as well as shifting of activity for transporting other kinds of cargo like logs, pulses and other commodities. This robust growth on NW-1 is now promoting the extensive use of barge for transport of goods.

The demand for barges in Goa has evolved with need for transporting iron ore mined in the state to the Mormugao port. The export of iron ore has been on the rise since COVID-19 and the main port exporting iron ore from India is from Mormugao port. The future of the barging industry in Goa is likely to depend on the iron ore export volume from the state. Exporters like Chowgules, Dempo and Sesa Goa have set up captive shipbuilding facilities to take care of construction of barges. Most of the independent barge operators prefer to build the barges on their own by hiring workshops located along side of the river Zuari and Mandvi.

Key factors driving the barge transport industry.

Government Initiatives: Barge transportation plays a crucial role in inland waterway transport, facilitating the movement of goods along rivers, canals, and other water routes. The Indian government has taken initiatives to increase inland water transport, invest in developing inland water transport and improve

regulatory measures such as the Inland Vessels Bill, of 2021. Which has seen cargo movement of 133.03 MMT through inland waterways.

Infrastructure Development: Infrastructure development including terminal development work to improve port facilities and fairway development work to improve the navigability of inland waterways, such as Jal Vikas Marg. These developments enhance the capacity of and support the growth of barge transport.

Cost and Fuel Effectiveness: Barges can carry large volumes of bulk cargo such as sand, coal, iron ore, etc. They are cost-effective and fuel-effective compared to other modes of transport such as rail or road. They are clean and less polluting, making an environment-friendly way of transportation.

Expected growth in barge transport industry in India.

As per government data inland water transport has grown to 133.03 MMT in FY 2023-2024. Over 10 years traffic on inland water transport has seen a growth of CAGR of 22.10%. The Indian government is hoping to grow and increase navigability for 1000-1500 Dead Weight Tonnage barges along the NW-1 stretch from Haldia-Varanasi under the Jal Vikas Marg project.

A Memorandum of Understanding is signed between Inland Waterways Authority of India and MOL (Asia Oceania) Pte. Ltd for transportation of LPG (Liquified Natural Gas) through barges on National Waterways-1 and National Waterways-2.

Maersk India has successfully transported containers over barges across the India-Bangladesh Border using the inland waterways of the Indo-Bangladesh Protocol Route.

With government initiatives, infrastructure development, investment in inland waterways a focus on sustainable transport, and a reduction in logistics costs, barge transportation will see tremendous growth.

Competitive Landscape:

The global shipping and logistic industry are characterized by a complex interplay of consolidation and fragmentation. While the top tier is dominated by a handful of mega-carriers, controlling a significant portion of the market, the industry also comprises a multitude of smaller players catering to niche segments. Entry barriers into the shipping and logistic industry are substantial, primarily due to the colossal capital investments required for vessel acquisition, port infrastructure, and operational expertise. However, regional players and specialized carriers have carved out niches, adding to the industry's complexity.

Key factors shaping competition in the Indian shipping industry include government policies, infrastructure development, trade volumes, fuel costs, and environmental regulations. The industry is gradually consolidating, with a few large Indian shipping companies emerging. Despite challenges, the sector presents opportunities for growth due to India's strategic positioning in the maritime trade and increasing global trade with developed and emerging countries.

Company Profiling [7]

Company Background

Shreeji Shipping Global Limited (formerly Shreeji Shipping) was founded in 1995 as a partnership firm. Initially focused on providing comprehensive shipping and logistics solutions, the company expanded its operations to include captive infrastructure such as barges, cranes, and warehousing. With a global reach, Shreeji Shipping has built a reputation for timely deliveries and efficient services. The company was incorporated as a limited company in 2024. Moreover, the company handles approximately 14 million tonnes of dry bulk cargo at anchorage across the West Coast of India, as well as at Puttalam Port in Sri Lanka and ports in Guinea and Sierra Leone, West Africa. With operations at more than 21 ports and terminals, the company's core focus remains on lighterage operations at anchorage, efficiently handling bulk cargoes such as coal, clinker, bauxite, cement, salt, fertilizers, iron ore, pet coke, sulphur, and limestone.

[7] As per the information provided by Company and available in public domain.

The tables below set forth the details of our vessel fleet as of March 31, 2025.

Particulars	Number of vessels owned	Size/Capacities	Principal uses
Self-Propelled Barges	63	Gross Tonnage: 656.00-1,419.66 Tonnes and Dead Weight Tonnage: 1,050.00-2,400.00 Tonnes	Self-Propelled Barges are used for lightering and marine transportation of goods including Dry Bulk Commodities.
Mini-bulk carriers	05	Gross Tonnage: 1,461.00 Tonnes and Dead Weight Tonnage: 2,250.00 Tonnes	Type of cargo vessel having hatch covers and designed for lightering and marine transportation of goods including Dry Bulk Commodities.
Motor tugs	08	Gross Tonnage: 38.66-247.00 Tonnes	For assisting the navigation and movement of larger vessels, such as ships and barges
Floating cranes	07	Gross Tonnage: 1,021.00-2,176.00 Tonnes	Require due to its heavy lifting capabilities at anchorage for cargo Handling operations
Total Fleet Size	83	-	-

Note:

Gross tonnage refers to total volume of the respective vessel's enclosed spaces (hull, deckhouse, cargo holds, machinery spaces, etc.).

Dead weight tonnage measures the weight-carrying capacity of a vessel.

The tables below set forth the details of earthmoving equipment fleet as of March 31, 2025:

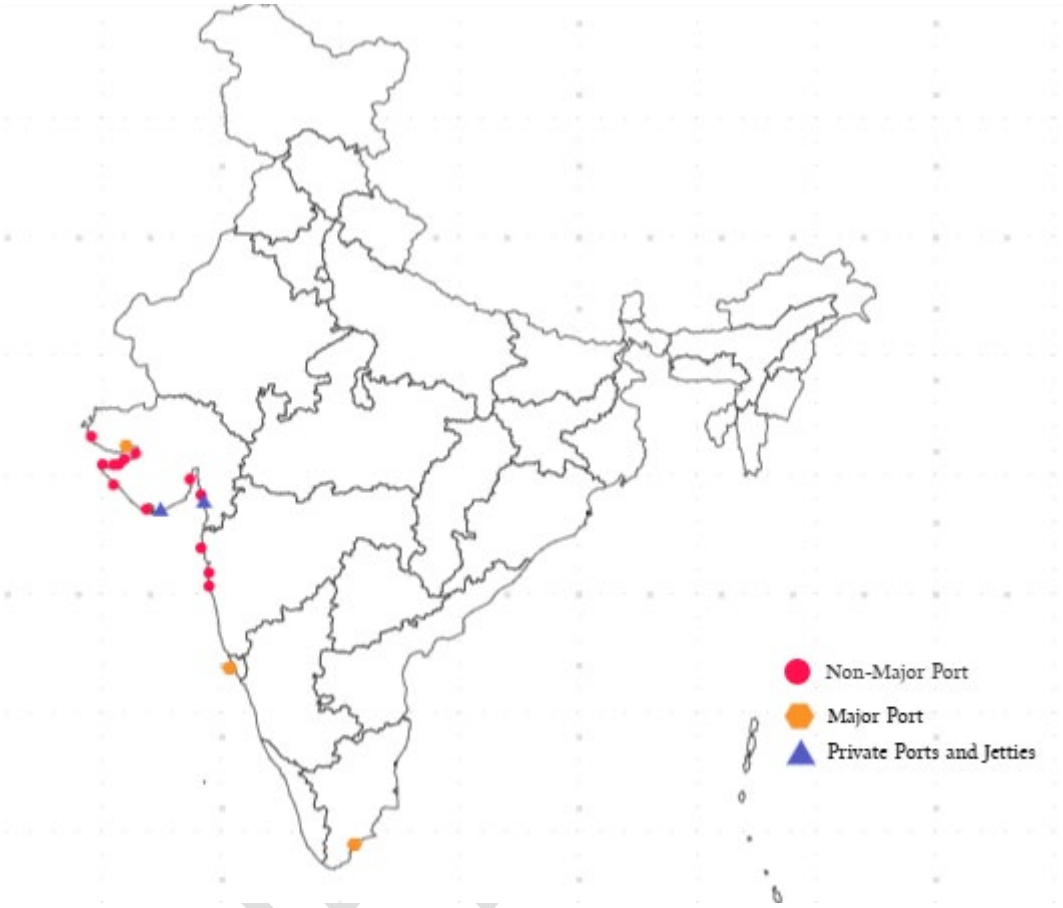
Particulars	Number of earthmoving equipment owned	Principal uses
Material handling machines	22	Equipment designed specifically for handling and moving materials in port operations
Excavators	66	Excavators are heavy construction and mining equipment designed for digging, lifting, and moving materials.
Pay loaders	59	Equipment used for loading and transporting materials over short distances
Tippers including Trailers	192	Quick transport and unloading of bulk materials between ships, stockpiles, and other transport modes
Tanker	17	Used for water sprinkling to manage dust, clean the port area, and maintain safety standards.
Other Vehicles	20	Other vehicles include Fogger, Tractors and others used for Transportation and Cargo Handling.
Total	376	

Ports of Operation:

Name of Port	Major Port	Non-Major Port	Others	All weather/ Seasonal	Name of State/Country Located in	Operations performed
Navlakhi	-	✓	-	All weather	Gujarat, India	Cargo Handling, Transportation and Fleet Chartering and Equipment Rentals services
Bedi	-	✓	-	All weather	Gujarat, India	Cargo Handling, Transportation and Fleet Chartering and Equipment Rentals services
Magdalla	-	✓	-	Seasonal	Gujarat, India	Cargo Handling and Fleet Chartering and Equipment Rentals services
Puttalam	-	-	✓	Seasonal	Sri Lanka	Cargo Handling and Fleet Chartering and Equipment Rentals services
Dharamtar	-	✓	-	All weather	Maharashtra, India	Fleet Chartering and Equipment Rentals services
Bhavnagar	-	✓	-	Seasonal	Gujarat, India	Cargo Handling and Fleet Chartering and Equipment Rentals services
Sikka	-	✓	-	Seasonal	Gujarat, India	Cargo Handling, Transportation and Fleet Chartering and Equipment Rentals services
Mul-Dwarka	-	✓	-	Seasonal	Gujarat, India	Cargo Handling and Fleet Chartering and Equipment

Name of Port	Major Port	Non-Major Port	Others	All weather/ Seasonal	Name of State/Country Located in	Operations performed
						Rentals services
V. O. Chidambaranar	✓	-	-	All weather	Tamil Nadu, India	Fleet Chartering and Equipment Rentals services
Kandla	✓	-	-	All weather	Gujarat, India	Cargo Handling, Transportation and Fleet Chartering and Equipment Rentals services
Marmugao	✓	-	-	All weather	Goa, India	Cargo Handling and Fleet Chartering and Equipment Rentals services
Hazira	-	-	✓	Seasonal	Gujarat, India	Cargo Handling, Transportation and Fleet Chartering and Equipment Rentals services
Ultratech Jetty	-	-	✓	Seasonal	Gujarat, India	Cargo Handling, Transportation and Fleet Chartering and Equipment Rentals services
Okha	-	✓	-	Seasonal	Gujarat, India	Fleet Chartering and Equipment Rentals services
Dahanu	-	✓	-	Seasonal	Maharashtra, India	Cargo Handling, Transportation and Fleet Chartering and Equipment Rentals services
Porbandar	-	✓	-	Seasonal	Gujarat, India	Fleet Chartering and Equipment Rentals services
Jakhau	-	✓	-	Seasonal	Gujarat, India	Cargo Handling, Transportation and Fleet Chartering and Equipment Rentals services
Vadinar	-	-	✓	All weather	Gujarat, India	Cargo Handling, Transportation and Fleet Chartering and Equipment Rentals services
Dighi	-	✓	-	All weather	Maharashtra, India	Cargo Handling, Transportation and Fleet Chartering and Equipment Rentals services
Konta	-	-	✓	Seasonal	Guinea	Fleet Chartering and Equipment Rentals services
Boffa	-	-	✓	Seasonal	Guinea	Fleet Chartering and Equipment Rentals services

Set forth below is a map showing the locations of the ports in India in which issuer entity provides their services.



Projects and Achievements:

State-of-the-Art Environmental Safeguards at Sulphur Handling Terminal: The company has established an exclusive terminal at Rozi Pier, Bedi Group of Ports, for Reliance Industries Limited (RIL). A record load rate was reached by handling all cargo at anchorage, resulting in five-year exclusive sulphur handling contract.

Sister Tugboat Construction and Cost Optimization for Long-Term Charter: The company was awarded a work to provide two tugs, Radha and Meera, on a five-year time charter basis. By introducing a tug-side launching solution at the shipbuilding platform in Bedi Port, effectively reduced the overall charter costs for the client, demonstrating a commitment to innovative, cost-efficient maritime solutions.

Ceylon Shipping Corporation: The company has been contracted to discharge imported coal at Puttalam Port, Sri Lanka, for a government thermal power plant.

Highest Productivity Award: The company has been honoured by Deen-Dayal Port Trust (DPT) for achieving exceptional productivity in the coal/coke handling category during the FY 2019. It has discharge 36,376 MT of coal in a single day at Kandla anchorage.

Enhancing Tonnage Capacity at Space-Constrained Minor Ports such Navlakhi: To accommodate additional cargo volumes at space-restricted minor ports, the company has established intermediary storage facilities adjacent to port area at Mota Dahisara near Navlakhi Port. This strategic solution allows clients to import or export additional parcels, including cargo types with slower dispatch timelines.

Comprehensive End-to-End Coal Logistics for Torrent Power: For the past 20 years, Shreeji Shipping has been the trusted logistics partner for Torrent Power, managing their imported coal supply chain with end-to-end responsibility. From precise cargo discharge at Navlakhi anchorage to efficient railway rake loading and timely delivery at Torrent Power's plant in Ahmedabad.

Sulphur Handling Terminal: Shreeji Shipping has been entrusted with Sulphur handling terminal at Rozi Pier, Bedi Group of Ports, for Reliance Industries Limited (RIL). The terminal is equipped with advanced machinery, including dust suppression guns and comprehensive firefighting systems. Additionally, stormwater drainage channels and wind barricading sheets have been implemented to ensure safe and responsible handling of sensitive cargo at the facility.

Expansion of Coastal fleet by inclusion of MBCs: To address the growing demands of its clients and provide comprehensive coastal supply chain solutions, Shreeji Shipping has significantly expanded its coastal fleet. The fleet now includes vessels with dual registration, ranging from 2,250 MT to 2,600 MT DWT. These Mini Bulk Carriers (MBCs), designed with deck strengths of 25 to 35 MT and class approved, are ideal for the coastal movement of heavy cargoes such as steel coils, cement, and clinker, as well as other bulk/break bulk cargoes across India. This expansion aims to enhance the efficiency and cost effectiveness of coastal cargo movement for both suppliers and end-users.

Comprehensive Asset Portfolio and Advanced Equipment Integration: The company boasts a shore-based and marine asset portfolio, strategically aligned to service its esteemed clientele. The company's fleet includes German-engineered floating cranes, specifically designed for handling gearless parcels, alongside advanced material handlers that significantly reduce cargo spillage and minimize shortages, ensuring optimal operational efficiency.

Generating additional volume and tonnage by making innovative transhipment operations in monsoon season for non-monsoon ports: Maintaining operational continuity at non-operational ports like Magdalla, Surat, the company implemented innovative transshipment operations using mini bulk carriers with telescopic hatch cover at Bhavnagar Port, effectively transporting cargo to Magdalla Port.

Strategic Acquisition and Market Dominance: The company acquire, the marine floating assets of United Shippers Limited (USL). This strategic acquisition has solidified company's position as the leading cargo-handling agency on the entire west coast of India at midstream minor ports.

Major Clients:

Reliance Industries Limited, Nayara Energy Limited, Adani Enterprise Limited, Aditya Birla Global Trading Private Limited, RSPL Limited, Ultratech Cement Limited, ArcelorMittal Nippon Steel India Limited (AM/NS), Sanghi Industries Limited, Torrent Power Limited, Agarwal Coal Corporation Private Limited, Mohit Minerals Limited, JSW Minerals Trading Private Limited, Saurashtra Cement Limited, Shree Digvijay Cement Company Limited, Tata International Limited, Taranjot Resources Private Limited and Balaji Malts Private Limited