सत्यमेव जयते

FINAL REPORT

‘Sub-Group on Promotion of energy efficient & low-cost Coastal shipping for passenger and freight’

DIRECTORATE GENERAL OF SHIPPING

18/06/2025

FORWARDING LETTER

18th June 2025

To,
Shri Sameer Kumar Khare Retired IAS
The Chairman,
National Shipping Board,
New Delhi

Sir,

It is our privilege to submit Report of the **'Sub-Group on Promotion of energy efficient & low-cost Coastal shipping for passenger and freight' under National Shipping Board (NSB).** The members of **Sub-Group** thank you for the confidence reposed in us to look into the matter. The **Sub-Group** has approached the entire gamut of issues with an open mind and made the final recommendations. The suggestions of all the members of the Sub-group have been taken care of while preparing the final report. The report is submitted for your kind consideration.

Yours faithfully,

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ACKNOWLEDGEMENTS

The 'Sub-Group on Promotion of energy efficient & low-cost Coastal shipping for passenger and freight' under National Shipping Board (NSB)' expresses its gratitude for entrusting the responsibility to prepare the Report on Promotion of energy efficient & low-cost Coastal shipping for passenger and freight**.** The members of this sub group greatly benefited from inputs received during the discussions held.

The Sub Group would like to express its gratitude to Shri Dr. Sanjeev Ranjan, Retd. IAS, Chairman, National Shipping Board (NSB) and Ex-Secretary to Ministry of Ports, Shipping & Waterways (MoPSW) and Shri Amitabh Kumar, Retd. IRS and the Ex-Director General of Shipping and Additional Secretary to Govt. of India, Shri Rajiv Jalota, IAS, Director General of Shipping, and Shri Kumar Sanjay Bariar, Additional Director General of Shipping, Mumbai for sharing their guidance to the Sub Group.

The Sub Group also acknowledges the valuable ideas and visions shared by all the members and places on record its appreciation for the excellent support and assistance provided by the officers of the Coastal Branch of the Directorate General of Shipping, Mumbai.

All the members provided unstinted support and the deliberations immensely benefitted preparation of this report.

Mumbai 16th June, 2025

EXECUTIVE SUMMARY

A Sub-Group was constituted to deliberate on the issue of **'Promotion of energy efficient & low-cost Coastal shipping for passenger and freight'** under National Shipping Board (NSB) and suggest the measures in this regard. It was indicated that the Coastal Shipping needs to be promoted as the energy efficient and lower cost mode of transport, for passengers and freight, through PPP mode with viability gap funding. The Sub-Group members comprised of representatives from officers of the Directorate General of Shipping, Ministry of Ports, Shipping and Waterways and the members of the stakeholders from the Industry and different organisations. The Sub Group members conducted five meetings to complete the above exercise.

INDIA AND COASTAL SHIPPING DEVELOPMENT

India's extensive coastline, along with numerous ports on the east and west coast, creates a favourable environment for the development of a substantial coastal shipping industry. Coastal shipping has the potential to act as a catalyst for economic growth, as evidenced by its success in other developed regions of the world. For instance, the European Union's experience has shown that the cost of transporting cargo along the coast is significantly lower, being 20% and 40% compared to road and rail transport, respectively. The EU's 'Marco Polo Scheme' aims to shift 20 billion tonne-km of freight from roads to coastal shipping annually. Similarly, China has been utilizing specially-built coastal vessels to transport approximately one billion tonnes of coal, steel, grains, and fertilizers along its coast. These examples demonstrate the effectiveness and benefits of coastal shipping as an efficient mode of transportation.

Despite the advantages of coastal shipping as the most efficient mode of transportation for bulk, liquid, and other cargo, the modal mix for transport within India heavily leans towards railways and roads. Currently, railways and roads account for approximately 87% of total freight transportation in the country. This skewed distribution persists even though India boasts a significant coastline with 13 major ports and around 205 non-major ports, as well as over 14,500 km of navigable inland waterways available for cargo transport. These resources provide ample opportunities for promoting and expanding the utilization of coastal shipping and inland waterway transport within India's transportation network.

There have been several deliberations by various bodies and committees on coastal shipping in the past, yet the coastal shipping sector has remained underdeveloped and is still struggling to sustain itself against stiff competition from rail and road transportation. Formulation of a vision for the sector with clearly defined timelines and identification of key performance indicators for monitoring progress is critical for the development of coastal shipping as an integral part of the logistics chain in India. In this direction, the step taken for Promotion of energy efficient & low-cost Coastal shipping for passenger and freight is a very important measure.

This document infuses fresh perspectives, thereby making an attempt at specifying immediate measures that may help to find the ways how the Coastal Shipping needs to be promoted as the

energy efficient and lower cost mode of transport, for passengers and freight, through PPP mode with viability gap funding and thereby coastal shipping finding its rightful place and contributing to overall development of the country.

EXISTING SCHEMES FOR INCENTIVIZING MODAL SHIFT OF CARGO

On 10th March 2016, the Ministry of Shipping launched the **'Scheme for Incentivizing Modal Shift of Cargo' (SIMSC)** scheme. This scheme covered the incentives to the beneficiaries for undertaking transportation of the different selected categories of cargo through Indian flag vessels, River Sea Vessels or barges on coastal shipping and inland waterways routes. However, this scheme could not be implemented due to various reasons. The scheme had undergone a thorough examination at different levels within the Ministry. Revisiting and modifying this scheme based on current circumstances and requirements could offer an immediate solution by way of taking the guidance from Invest India, which has conducted studies on similar schemes.

The **Fisheries & Ports Department of Kerala implemented the scheme providing incentives for Coastal Shipping at fixed rate**. This particular scheme in connection with the coastal shipping movement is based upon localised study and applies to specific port and its limited hinterland. Such type of scheme can be prepared by studying the existing characteristics and different requirements at different ports and their hinterland to derive the real benefits. The needs of the trade and actual local conditions have to be considered in detail before applying such schemes to other localities.

Policy for reimbursement of freight subsidy for distribution of Subsidized fertilizers through Coastal Shipping or/and inland waterways. Only the movement of indigenous subsidized fertilizers (Urea and P&K fertilizers) through coastal shipping/ inland waterways will be eligible for payment of freight subsidy at this stage. Such type of subsidy is not available for the movement of imported fertilizers. The viability gap funding can be explored for extending the freight subsidy for the movement of imported fertilizers with strict checks and controls.

Marco Polo II programme in Europe was in force from 2007 to 2013, as a successor to the Marco Polo I (2003-2006) and (Pilot Actions for Combined Transport) PACT (1997-2001) programmes in Europe. Such type of programme can be studied and implemented in various areas of countries by providing the viability gap funding in the initial phases for some specific projects. Such type of sector specific or cargo specific viability gap funding projects can be studied and implemented at some locations.

The Ro-Ro-Ro-Pax services operating at Ghogha to Hazira in Gujarat has boosted the business & increased the connectivity. The journey is shortened from 10-12 hours to 3-4 hours between Saurashtra and South Gujarat and it has saved time and expenses. Such water-based transportation service is an effective measure to lower the logistics costs, reducing travel time and promotion of coastal shipping on several feasible routes. Few monetary incentives along with boost-up to Ro-Ro-Ro Pax service will work as a measure to reduce transportation cost

which will ultimately help to reduce overall cost of product. The benefits may be provided by reducing duty for Coastal Bunker Fuel or by providing carbon credits & incentives for promoting GHG emission reduction.

WAY FORWARD

There is requirement to reinvent the schemes like 'Scheme for Incentivizing Modal Shift of Cargo' (SIMSC) scheme of the erstwhile Ministry of Shipping, extend the scheme providing incentives for Coastal Shipping at fixed rate of the Fisheries & Ports Department of Kerala to other states, extension of the Policy for reimbursement of freight subsidy for distribution of Subsidized fertilizers through Coastal Shipping or/and inland waterways to the movement of imported fertilizers, exploring the world known programmes like Marco Polo II in Europe from 2007 to 2013.

There is a need to remove some of operating infirmities which impact the competitiveness of Indian shipping. The operating parameters like Bunker rate, Seafarers' wages taxation, Direct tax – Tonnage Tax Rate, Direct Tax – Cadet Training Cost, IGST on import of ships, Inability to offset input GST on goods procured, GST on (freight) transport of cargoes between two Indian ports, GST payable on maintenance, repair or overhaul (MRO) services procured overseas, 5% IGST payable to Customs on the sum of dry docking expenditure incurred outside India, plus cost of insurance and freight (to & fro) and procuring dry docking services for statutory compliance adversely impact the competitive ability of Indian ships and need to be brought down on par with foreign ships by providing the measures to deal with them more rationally.

Further, there is a need to ensure that long-term, low-cost funding is made available for acquisition of new and second-hand shipping tonnage to Indian shipping companies. We have to see the need for a dedicated fund and how funding from the GIFT City and NIIF falls short.

In addition to above, there is urgent need to resolve some of the very important issue which are dragging the development of the Coastal Shipping in India. These issues may be like introduction of harmonized manning scales for Indian coastal vessels taking into account practical skills as well as STCW convention training, identification of practical and cost effective alternatives to rigid IMO requirements of marine equipment manufacturing & servicing focusing on indigenisation and BIS approved products and services, reduction of fuel costs and emissions for coastal ships by using Bio-Fuels and other alternative cleaner fuels, establishing a standardised & simplified process for financing coastal vessel acquisition by MSMEs ship owners through the newly established ship finance/leasing companies in GIFT city, providing the Green Channel for Coastal Cargo, rationalizing Coastal Container Identification, developing Coastal Cargo complex, devising Coastal Multimodal Cargo Document, making it Compulsory Modal Shift of cargo on viable coastal port, reducing Port Ground Rent Charges, starting various Coastal Awareness Program, creating Skilled Workforce and extending the Facilities such as Capital Subsidy.

CHAPTER 1

THE IMPORTANCE OF COASTAL SHIPPING DEVELOPMENT IN INDIA

1. The reasons why the development of coastal shipping in India is highly desirable can be summarized as follows:

1.1. Promoting Employment Opportunities: Coastal shipping expansion will create more jobs in various sectors related to shipping, such as ports, logistics, manufacturing, tourism, shipbuilding, and ship repairs.

1.2. Boosting Trade and Commerce: It will facilitate increased trade and commerce by providing a reliable mode of transportation for goods and passengers.

1.3. Enhancing Cost Effectiveness and Efficiency: Coastal shipping will optimize the utilization of different transportation modes, leading to overall cost-effectiveness and improved efficiency.

1.4. Reducing Environmental Impact: By shifting to coastal shipping, there will be a reduction in carbon footprints, resulting in a positive environmental impact.

1.5. Cost-Effective Transportation: Coastal shipping offers a cost-effective means of transporting cargo and passengers along the Indian coastline.

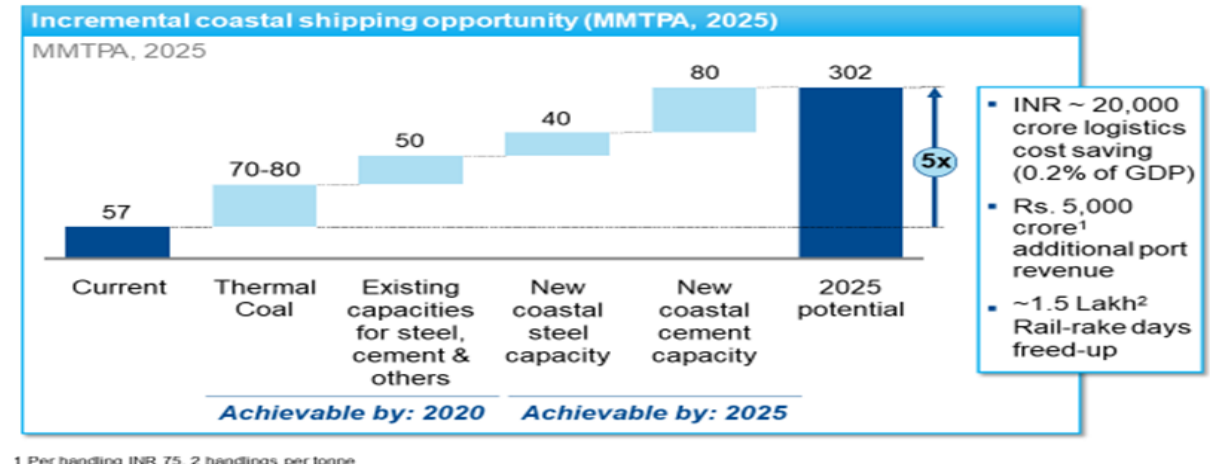
1.6. Mitigating Urban Issues: It will help reduce noise pollution, traffic congestion, and road accidents in urban areas.

1.7. Utilizing Natural Resources: Coastal shipping allows India to leverage its long coastline and natural resources effectively.

1.8. Enhancing Connectivity: It will establish connectivity for both major and non-major ports, facilitating the movement of EXIM cargo within India and retaining trans-shipment activities in the country.

2. The primary advantages of coastal shipping and inland water transportation include lower transportation costs and reduced carbon emissions compared to other modes of transport. A well-developed coastal shipping network is a valuable asset for a nation as it ensures connectivity and offers a more economical cost per ton for cargo movement. Furthermore, coastal shipping holds significant untapped potential in terms of cargo volumes, enabling the reduction of logistics costs for Indian trade and enhancing the competitiveness of Indian exports in global markets.

3. Studies have found potential to increase volumes of coastal shipping to 5 times of the current level. The following figure gives the details of the current level of various cargo handled in Indian Port during 2020 and the potential of cargo handled as projected in 2025. **Fig. 1.1- Incremental coastal shipping opportunities (MMTPA, 2025)**



[1]Source: Sagarmala, Ministry of Shipping

4. According to a 2016 study conducted by Sagarmala, the Ministry of Shipping, coastal shipping in India has the potential to handle cargo volumes of 302 MMTPA (Million Metric Tons Per Annum) by 2025. The primary contributors to this cargo volume will be thermal coal, steel, and cement. However, the Indian industry seems unaware of the importance of promoting coastal shipping, which could also effectively reduce national carbon emissions and alleviate congestion on roads and railways.

5. The current status of coastal shipping in India, as per provisional data provided by the Ministry of Ports, Shipping& Waterways for the fiscal year 2018-19, reveals that coastal shipping accounts for approximately 7% of the overall movement of domestic cargo within India. However, Indian coastal ships carry around 59% of the domestic cargo. While Indian ships historically held a 70% share in India's coastal trade, this percentage has declined to 59% in the fiscal year 2018-19. The coastal shipping sector, as a vital part of the Indian economy, has the potential to significantly contribute, but its integration with the broader economy remains largely unexplored.

6. Currently, about 65% of coal transportation in India, including indigenous production and imports, relies on railways. The existing railway network is already handling cargo beyond its capacity in certain high-density routes, with approximately 40% of railway sections operating at over 100% capacity. Moreover, around 69% of high-density routes are running over capacity.

7. Given that proven coal reserves and the majority of current coal production are concentrated in specific areas of states such as Odisha, West Bengal, Jharkhand, Madhya Pradesh, Chhattisgarh, and Maharashtra, congestion is expected to increase. Building railway capacity in these areas is both costly and time-consuming. Therefore, it is crucial to explore immediate alternative modes of transportation, such as coastal shipping, to alleviate the burden on railways along the coast. This can be achieved by fostering synergy between railways, inland waterways, coastal shipping, and other transportation modes.

8. According to the Urjamala study conducted by McKinsey & Co., a transportation model that combines road, rail, sea, and road/rail is considered the optimal approach for coal transportation. Similarly, coastal shipping should be viewed as a complementary mode of transportation to roads and railways, helping to alleviate the excess cargo burden on these routes along the Indian coast.

9. Challenges to expanding and maintaining railways and roads The table below illustrates the expenditure incurred by the government on roads and railways during the five-year plans from the fifth to twelfth plans. It demonstrates the government's continuous efforts to expand road and railway infrastructure. However, in several sectors, roads and railways have reached their maximum capacity, making further expansion difficult. The costs associated with the maintenance of roads and railways are already significant and are expected to further increase in the future.

Table No 1.1: Planned expenditure on Railways, Road Sectors& Civil Aviation from 5th to 12thin Five Year Plans.

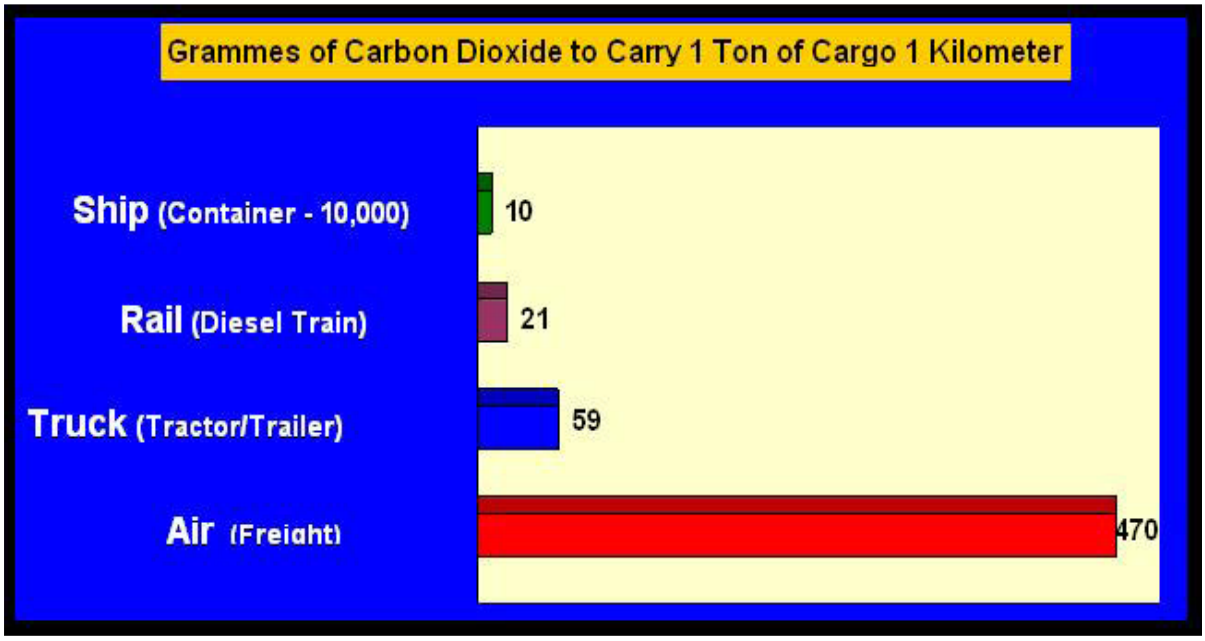
Sector(Share in % of the total budget)	12th Five year Plan	11th Five year Plan	10th Five year Plan	9th Five year Plan	8th Five year Plan	7th Five year Plan	6th Five year Plan	5th Five year Plan
Railways	43.0%	47.7%	41.7%	53.8%	46.0%	54.6%	42.2%	40.6%
Road	34.1%	39.3%	40.9%	17.7%	28.7%	31.8%	38.4%	33.5%
Civil Aviation	5.9%	10.1%	8.9%	12.1%	6.8%	3.4%	7.1%	6.2%
Total (in Rs. crore)	430939	489250	145340	92106	59164	22595	12080	5420

Source: NITI Aayog (formerly Planning Commission)

10. India can draw inspiration from the European Union, which has set a target for over 50% of their road and rail transport to be conducted through short sea shipping by 2030. Although achieving a similar target in India may be challenging, it is still attainable. Considering the potential of domestic coastal shipping to contribute to greener transportation, it is crucial to establish a viable scheme that incentivizes and supports the shift of cargo to water transportation.

11. Additionally, it is important to note that carbon dioxide (CO2) emissions from ships are the lowest compared to other modes of transportation. This highlights the environmental advantage of utilizing coastal shipping as a means to reduce carbon emissions.

Fig. 1.2 Emission of CO2 to carry one ton of cargo/km.



Source: Network for Transport and Environment/World Shipping Council 2009

12. The above fig. 1.2 illustrates a summary of emissions from various modes of transportation, highlighting coastal shipping as the most environmentally sustainable option. It clearly demonstrates that carbon emissions in coastal sea transportation are lower compared to road transport. This emphasizes the importance of addressing emissions from transportation urgently.

13. As per International Chamber of Shipping, in terms of CO2 emissions per ton of cargo transported one mile, shipping is recognized as the most efficient form of commercial transport. However, the enormous scale of the industry means that it is nevertheless a significant contributor to the world's total greenhouse gas emissions (around 3% of total global CO2 emissions). Fig. 1.3 Comparison of typical CO2 emissions between modes of Transport in gm/ton-kms

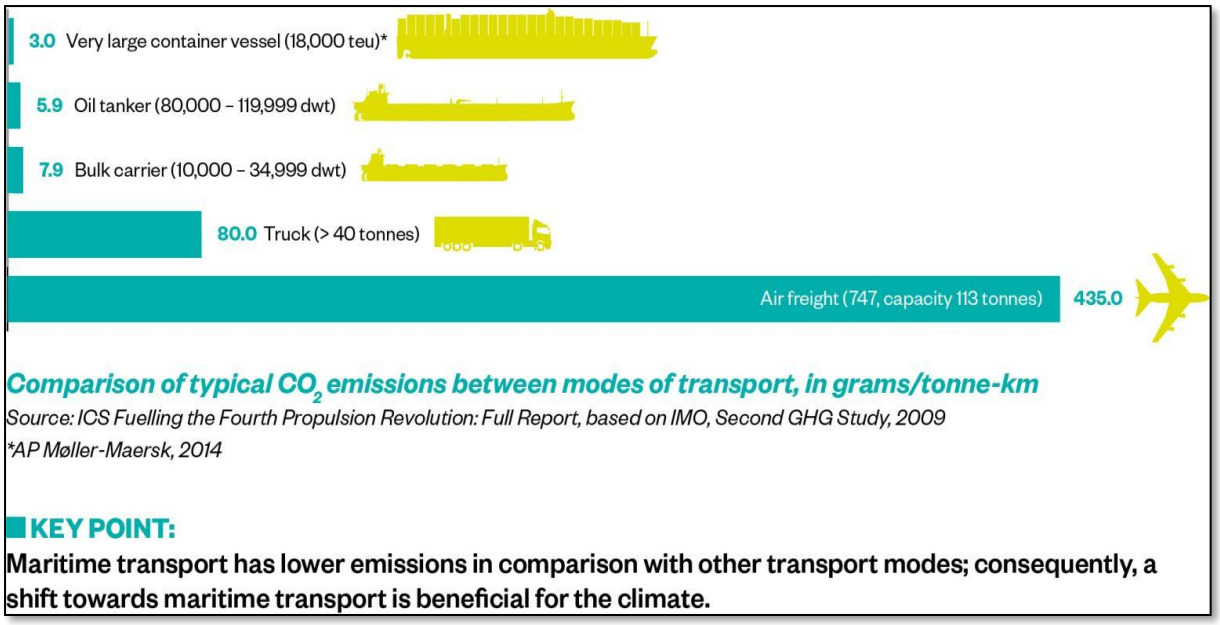


Table No. 1.2 Summary of emission data for various types of ships compared with trucks

Type of Ship	CO2 (g/t-km)
100 TEU container ship	18.9
1500 TEU container ship	**12.9**
6000 TEU container ship	11.1
2000t bulk carrier	11.1
20000t bulk carrier	5.6
80000t bulk carrier	2.4
Euro 2 truck (20t cargo)	50.4
Euro 3 truck (20t cargo)	**50.4**

Source: WFF 2002Further, our commitment to of IMO also compel us to promote the coastal shipping as one of the contributing factors to achieve it.

14. Considering India's green commitments at the United Nations Framework Convention on Climate Change (UNFCCC), the policy intent to curb harmful emissions takes on added significance. To encourage Indian industries to adopt greener transportation options, fiscal incentives linked to carbon and other harmful emissions should be introduced. These incentives would serve as a means to promote the use of environmentally friendly modes of transport and align with India's environmental goals at the UNFCCC.

15. Currently, there is a discrepancy in the fiscal incentives provided to different modes of transportation in India. Moreover, the allocation of these incentives does not correspond proportionately to the greenhouse gas emissions generated. In the twelfth five-year plan, coastal shipping receives no known budgetary support, while road infrastructure is granted a significant allocation of Rs. 1.5 lakh crore.

16. However, it is evident that coastal shipping requires minimal specific infrastructure and primarily utilizes India's abundant natural resource: water. Nevertheless, adequately equipped ports are necessary for the efficient handling of cargo.

17. In conclusion, India's green commitments present a compelling argument for linking fiscal incentives for various modes of transportation to carbon emissions and other harmful substances. There is a strong case for incentivizing the shift of cargo from other alternative means of transport to coastal shipping. This approach would not only optimize the utilization of India's natural resources but also contribute to a greener and more sustainable transportation system.

CHAPTER 2

AN INTRODUCTION TO COASTAL SHIPPING IN INDIA

1. To gain insights into the fundamental port infrastructure and the volume of traffic they handle, it is essential to examine the data regarding the number of ports and the total cargo they manage. The following information provides an overview of the major and non-major ports in India in this regard:

2. Major Ports: Major ports in India are those that are administered by the Central Government. There are a total of 13 major ports, including Mumbai Port Authority, Chennai Port Authority, SMP (Kolkata Dock System), SMP (Haldia Dock Complex), Visakhapatnam Port Authority, Cochin Port Authority, Paradip Port Authority, Jawaharlal Nehru Port Authority (JNPA), Deendayal Port Authority (formerly Kandla), Mormugao Port Authority, New Mangalore Port Authority, V.O. Chidambaranar Port Authority (formerly Tuticorin), and KamarajarPort Ltd.(formerly Ennore). The details in this regard is mentioned in the report on the Basic Port Statistics of India 2020-21, Ministry of Ports, Shipping &Waterways.(Report is as per Annexure –I)

3. Non-Major Ports: Non-major ports, also known as minor ports, are managed by the respective state governments or private entities. The number of non-major ports in India is substantial, with several located along the coastline. These ports vary in size and capacity, contributing to the overall maritime infrastructure of the country. There are around 217 minor ports.

4. Analyzing the details of major and non-major ports, including their location, infrastructure, and cargo handling capabilities, is crucial for understanding the maritime landscape and the scale of operations in India's port sector.

Table No. 2.1 Major and non-major ports in India

S.	State	No. of Major ports in	No. of Non major ports in
1	Guiarat	1	48
2	Lakshadweep	-	10
3	Maharashtra	2	48
4	Andaman & Nicobar	-	24
5	Karnataka	1	13
6	Tamil Nadu	3	17
7	Andhra Pradesh	1	15
8	Goa	1	5
9	Orissa	1	14
10	Daman & Diu	-	2
11	Kerala	1	17
12	Puducherry	-	3
13	West Bengal	2	1
Total		13	217

Source: Basic Port Statistics of India 2020-21

5. During the fiscal year 2020-21, the major ports in India handled a total of 525.33 million tonnes of overseas cargo and 147.35 million 18ones of coastal cargo. This indicates a decline of 3.6% in overseas cargo traffic compared to the previous year (2019-20), while coastal cargo traffic experienced a decline of 7.8% in the same period. Overall, the total cargo traffic handled by major ports in 2020-21 decreased by 4.6% compared to the previous year. The coastal traffic at major ports (commodity wise) is mentioned below:

Table No 2.2 Coastal traffic at major ports (Commodity-wise)

						Million Tonnes
Major Port	**2019-20**			**2020-21**		
	Oversea	**Coast**	**Tota**	**Oversea**	**Coast**	**Tota**
SMP(Kolkata Dock System)	15.95	1.35	17.30	15.32	0.58	**15.90**
	(2.93)	(0.85)	(2.45)	(2.92)	(0.39)	**(2.36)**
SMP(Haldia Dock Complex)	37.49	9.19	46.68	40.40	5.07	**45.47**
	(6.88)	(5.75)	(6.62)	(7.69)	(3.44)	**(6.76)**
Paradip	77.28	35.41	112.6	83.92	30.63	**114.5**
	(14.18)	(22.16)	(15.9	(15.97)	(20.79)	**(17.03**
Visakhapatnam	56.39	16.34	72.72	52.99	16.86	**69.84**
	(10.34)	(10.23)	(10.3	(10.09)	(11.44)	**(10.38**
Chennai	41.78	4.97	46.76	37.96	5.59	**43.55**
	(7.66)	(3.11)	(6.63)	(7.23)	(3.79)	**(6.47)**
Kamarajar	18.00	13.75	31.75	14.70	11.19	**25.89**
	(3.30)	(8.61)	(4.50)	(2.80)	(7.59)	**(3.85)**
V.O.Chidambaranar	27.37	8.71	36.08	21.14	10.65	**31.79**
	(5.02)	(5.45)	(5.12)	(4.02)	(7.23)	**(4.73)**
Cochin	22.94	11.10	34.04	20.40	11.10	**31.50**
	(4.21)	(6.95)	(4.83)	(3.88)	(7.53)	**(4.68)**
NewMangalore	29.11	10.04	39.15	25.83	10.67	**36.50**
	(5.34)	(6.28)	(5.55)	(4.92)	(7.24)	**(5.43)**
Mormugao	14.45	1.56	16.01	20.58	1.41	**21.99**
	(2.65)	(0.98)	(2.27)	(3.92)	(0.96)	**(3.27)**
J.L.Nehru	64.27	4.18	68.45	60.10	4.71	**64.81**
	(11.79)	(2.62)	(9.71)	(11.44)	(3.19)	**(9.63)**
Mumbai	34.29	26.40	60.70	29.58	23.74	**53.32**
	(6.29)	(16.52)	(8.61)	(5.63)	(16.11)	**(7.93)**
Deendayal	105.84	16.76	122.6	102.41	15.15	**117.5**
	(19.42)	(10.49)	(17.3	(19.50)	(10.28)	**(17.48**
Total	545.15	159.77	704.9	525.33	147.35	**672.6**
	100.00	**100.00**	**100.0**	**100.00**	**100.00**	**100.0**

Source: Basic Port Statistics of India 2020-21

6. The coastal Traffic Handled at Non-Major Ports (Principal Commodity-wise) - 2018-19, 2019-20 & 2020-21 is mentioned below:

Table No 2.3 Traffic Handled at Non-Major Ports (Principal Commodity-wise) - 2018-19, 2019-20 & 2020-21

('000 Tonnes)

Commodity in ALL STATES	YEARS		
	2018-19	**2019-20**	**2020-21**
POL & other Products	27295	22330	17464
Coal	21226	21297	16709
Building Material	11140	11380	9189
Fertiliser & FRM (Fertiliser Raw Material)	244	530	0
Chemicals	99.78	0	0
Iron Ore	28444	26403	23580
Iron & Steel	2690	1448	1633
Other Ore	13	0	0
Salt	104	64	0
Edible Oil	0	4	13
Foodgrains	10	9	41
Containers	991	3773	5911
Others	4063	6732	6218
Total	**96321**	**93969**	**80759**

Source: Basic Port Statistics of India 2020-21

7. The allocation of budgetary resources and planned outlay for the transport sector in India has primarily focused on the expansion and enhancement of road and rail networks. However, it is essential to recognize coastal shipping as a significant component of the transportation sector and there is need to be provide equivalent attention to its growth and development.

8. While road and rail networks have received substantial budgetary allocations and planned outlays, coastal shipping has not received equivalent support and investment. It is imperative to address this disparity and allocate sufficient resources for the growth and development of coastal shipping as a vital mode of transportation.

9. Recognizing the potential benefits and advantages of coastal shipping, such as reduced congestion, lower carbon emissions, and optimal utilization of natural resources, policymakers should strive to promote its growth through adequate budgetary provisions and planned outlays. This will ensure a balanced approach to the overall development of the transport sector in India.

10. The table no. 2.4 below highlights the existing emphasis placed by Indian planners and policymakers on road and rail infrastructure, while emphasizing the need to consider coastal shipping as a vital element in the transport sector:

Table No 2.4 Approved plan allocation to Shipping, Railways, Road and Civil Aviation in five-year plans

Sector	12th Five year Plan	11th Five year Plan	10th Five year Plan	9th Five year Plan	8th Five year Plan	7th Five year Plan	6th Five year Plan	5th Five year Plan
Shipping (Total) *of which* -	17.0%	2.9%	8.5%	16.4%	18.6%	10.2%	12.3%	19.7%
Shipping					**6.2%**	**3.7%**	**6.2%**	**8.3%**
SCI		**2.7%**	**4.0%**	**5.4%**	**5.6%**			
D.G. Shipping		**0.1%**	**0.2%**	**0.1%**	**0.2%**			
Ports	**15.6%**		**3.7%**	**10.5%**	**6.0%**	**5.4%**	**5.4%**	**10.5%**
IWT	**0.1%**	**0.1%**	**0.4%**	**0.3%**	**0.6%**	**1.0%**	**0.6%**	**0.6%**
DG (Light houses & Light ships)		**0.03%**	**0.1%**	**0.1%**	**0.1%**	**0.1%**	**0.1%**	**0.3%**
Railways	43.0%	47.7%	41.7%	53.8%	46.0%	54.6%	42.2%	40.6%
Road	34.1%	39.3%	40.9%	17.7%	28.7%	31.8%	38.4%	33.5%
Civil Aviation	5.9%	10.1%	8.9%	12.1%	6.8%	3.4%	7.1%	6.2%
Total (in crore)	430939	489250	145340	92106	59164	22595	12080	5420

Source: NITI Aayog (formerly Planning Commission)

11. A comprehensive understanding of the modal mix and the extent of participation of coastal shipping is crucial in assessing the transportation landscape in India. According to a study conducted by the TATA Strategic Management Group, the share of coastal shipping in India currently stands at less than 7%. In comparison, coastal shipping constitutes approximately 30% of the transportation mix in China and 14% in the United States.The relatively low share of coastal shipping in India highlights the untapped potential and room for growth in this sector. Increasing the participation of coastal shipping can bring about numerous benefits such as reduced congestion on roads and railways, lower carbon emissions, and cost-effective transportation of goods and passengers along the vast coastline of India.

12. To fully leverage the advantages of coastal shipping and enhance its contribution to the transportation mix, concerted efforts and strategic measures are required. This may include developing supportive policies, improving port infrastructure, promoting intermodal connectivity, and incentivizing the use of coastal shipping for cargo movement.

13. By increasing the share of coastal shipping and aligning it with global benchmarks, India can optimize its transportation system, reduce reliance on other modes of transport, and unlock the economic and environmental benefits associated with a well-developed coastal shipping network.

14. An announcement has been made in the Budget 2023-2024 that the Coastal shipping will be promoted as the energy efficient and lower cost mode of transport, both for passengers and freight, through PPP mode with viability gap funding. The provisions like coastal shipping with Viability Gap Funding (VGF) for people and freight movement will further facilitate the seamless cargo movement and it will also reduce the logistics costs. It will also lead to a reduction in overdependence on the road sector in terms of goods transport.

15. It is imperative to find out the various ways to make this policy ready to implement in real sense. A series of meetings were organized for the members of the Sub-Group stakeholders to discuss and deliberate on various issues related to the promotion of energy-efficient and cost-effective coastal shipping for both passengers and freight. The members were informed that the sub-group would thoroughly examine all the assigned aspects concerning this subject. The discussion highlighted the need to promote coastal shipping as an energy-efficient and affordable mode of transport for passengers and freight, through a Public-Private Partnership (PPP) model with Viability Gap Funding (VGF).

16. It was observed that several proposals aimed at developing coastal shipping, such as Priority Berthing for Coastal Vessels, Green Channel for Coastal Cargo, Coastal Container Identification, Coastal Cargo Complex, Coastal Multimodal Cargo Document, Compulsory Modal Shift of cargo on viable coastal port pairs, Port Ground Rent Charges, and Coastal Awareness Program, needed to be considered by the sub-group. The National Shipping Board (NSB) acknowledged the existence of a previously constituted sub-group that worked on a similar agenda. This sub-group has now been reconstituted and includes members such as the Chairman of Paradip Port Authority (PPA), Chairman of Syama Prasad Mookerjee Port, Kolkata (SMPK), representatives from Indian Coastal Conference Shipping Association (ICCSA), Coastal Container Transporters Association (CCTA), Chowgule Shipyard, Association of Multimodal Transport Operators of India (AMTOI), Indian Register of Shipping (IRS), Inland Waterways Authority of India (IWAI), Food Corporation of India (FCI), The Fertilizer Association of India (FAI), and Shipping Corporation of India (SCI). Their task is to address the identified issues and requirements and submit a report to the NSB. The meetings

witnessed active participation and valuable insights from almost all stakeholders, except PPA and SMPK, who provided significant input regarding the daily challenges faced by the industry when utilizing coastal shipping services. The following chapters will give the details suggestions in this case.

17. The Sub Group members conducted five meetings and discussed the various issues pertaining to 'Promotion **of energy efficient & low-cost Coastal shipping for passenger and freight'**and suggested some of the important measures in this regard. (Annexure-II covers the minutes of the meeting) These measures will be discussed in detail in this regard are discussed in the following chapters.

CHAPTER 3

DETAILS OF EXISTING SCHEMES FOR INCENTIVIZING MODAL SHIFT OF CARGO AT CENTRE AND STATES

A. 'Scheme for Incentivizing Modal Shift of Cargo' (SIMSC)

1. During the meeting of sub-group discussed various schemes which have been announced and which have been implemented at different places in India & abroad. . It was brought to attention that the Ministry of Shipping had previously introduced a significant scheme in 2016-17 known as the **'Scheme for Incentivizing Modal Shift of Cargo' (SIMSC).** According to the information available on the Press Information Bureau, Government of India, Ministry of Shipping, on 10th March 2016 & it is notified that the Ministry of Shipping launched the SIMSC scheme. This scheme encompasses the following key areas:

The incentives under SIMSC will be provided to the beneficiaries for undertaking transportation of the following categories of cargo through Indian flag vessels, River Sea Vessels or barges on coastal shipping and inland waterways routes, namely:-

(i) Transportation of bulk or break – bulk cargo pertaining to seven commodities viz. Fertilizers, food grains, marbles, tiles, sugar, edible salt and over – dimensional cargo, shall be eligible for an incentive @ Re. 1 per tonne per nautical mile upto a maximum of 1,500 nautical miles in each trip starting from origin and ending at the destination. The number and type of commodities under this head are subject to revision by the Government from time to time.

(ii) Transportation of any commodity in containers in Full Container Load (FCL) shall be eligible for an incentive @ Rs.3,000/- per TEU. Thus transportation of any commodity through forty feet or other larger sized containers shall be incentivised based on number of times the said container size can be converted into TEUs.

(iii) Transportation of vehicles through Ro-Ro Vessels shall be eligible for the following incentives:

(a) Incentive @ Rs. 300/- per two-wheeler vehicle;

(b) Incentive @ 600/- per three-wheeler vehicle; and

(c) Incentive @ Rs.3,000/- for other vehicles.

In addition, as per TAMP guidelines Concession on Tariff is permitted and accordingly, the cargo/container related charges for all Coastal Cargo other than Iron Ore, Thermal Coal and POL should not exceed 60% of the normal charges.

2. The Ministry of Shipping (MoS) has launched the Scheme for Incentivizing Modal Shift of Cargo (SIMSC) during the Five Year Plan of (April 1, 2015 to March 31, 2022). The objective of the scheme is to encourage the shift of domestic cargo transportation from road and rail to coastal and inland waterway transport. SIMSC aims to promote coastal shipping and inland waterway transportation as viable alternatives by providing Central Financial Assistance (CFA) to compensate for first-mile and last-mile connectivity costs. The scheme also addressed environmental and social concerns related to congestion on roads and railways. It also emphasized the seamless movement of cargo along riverine and coastal waterways.

3. These guidelines provided a framework for implementing SIMSC, outlining the roles, responsibilities, and key steps for stakeholders involved. The Ministry of Shipping expected to incentivize the transportation of identified commodities through coastal routes, including containers or bulk/break-bulk cargo, as these commodities have high potential but low current utilization of coastal and inland waterways. The scheme also encouraged the movement of automobiles on coastal and inland waterway routes, especially on north-south and south-north routes.

4. While shippers were the primary beneficiaries as they choose the mode of transportation, the scheme also aimed to generate employment for coastal and riverside communities by granting financial assistance only when cargo is transported through Indian flag vessels, River-Sea Vessels (RSVs), and barges operating on coastal or inland waterway routes.

5. The major ports, non-major ports, and Inland Waterways Authority of India (IWAI) were crucial stakeholders involved in the successful implementation of the scheme. Trips involving these ports or IWAI as origins or destinations are eligible for incentives, with the exception of trips between two non-designated non-major ports.

6. The guidelines highlighted the vision, objectives, stakeholders, roles, responsibilities, and implementation workflow of the scheme. The aim was to encourage modal shift from railways and roads to coastal and inland waterway routes, benefiting stakeholders and facilitating efficient cargo movement. The document of the SIMSC is attached as **Annexure-III** with this report for ease of reference.

7. However, it was informed that the aforementioned scheme could not be implemented due to various reasons; including insufficient budgetary support. The scheme had undergone a thorough examination by KPMG and had also undergone scrutiny at various levels in the Ministry. To address the issue of Viability Gap Funding (VGF), it was proposed that revisiting and modifying this scheme based on current circumstances and requirements could offer an immediate solution. It was noted that further study is required for this scheme, considering that cost factors like fuel, which significantly contribute to expenses, have undergone changes. In response to this issue, it is proposed to seek guidance from Invest India, which has conducted studies on similar schemes, to obtain valuable insights.

B. Fisheries & Ports Department of Kerala implemented the scheme providing incentives for Coastal Shipping at fixed rate.

1. The **Fisheries & Ports Department of Kerala implemented the scheme providing incentives for Coastal Shipping at fixed rate**. This scheme was based upon the study report by National Transportation Policy and Research Centre **(NATPAC).** The Cochin International Container Trans-shipment Terminal (ICTT) at Vallarpadam, which functions adjacent to the Cochin Port, only major port in Kerala, is expected to be a driving force for the economic development in Kerala. The transportation sector, which deals with transporting containers from/to the ICTT, plays a major role in the smooth functioning of this sector. Over the years, a demand to develop a freight rate policy for container trailers plying at Vallarpadam has been strong among the agencies/associations involved. In this background, NATPAC conducted a scientific study to assess the operating cost of container trailer vehicles plying at Vallarpadam ICTT. The study was significant in evolving scientific methodology for measuring the variations in cost of operation and taking decision on freight rate fixation for Container Trailers by the Government. The total operating cost/km and minimum freight rate for 20 feet and 40 feet container was worked out. To arrive at the standard cost for operations, the cost tables were developed by thorough analysis of important components of the trailer by studying the product life cycle. This was done for material and labour maintenance cost elements systems wise. Standard costing practices as per Cost Model was applied for the determination of freight rates. The Cost Analysis was carried out for fixing the freight rate by considering various factors involved in the operation of container trailers. This information was used to arrive at the minimum freight rate and operating cost per kilometre.

2. The study was conducted on container trailers plying for Vallarpadam. For the study all types of the container trailers plying at Vallarpadam were selected. The detailed analysis was

done on TATA commercial vehicles as per the details provided by the concerned. The data collected was further analyzed to find the cost behavior for arriving at the operating cost. Cost analysis was also done from the standard Cost Tables. From the analysis the following base rate and the cost per kilometer were arrived:

Table 3.1. Base Rate & Cost per Kilometer including ROI eter

Vehicle Type	Minimum Rate up to 40 kms (In Rupees)	Cost per kilometer (In Rupees)
20 ft Double Axle Haulage Trucks (25 MT)	5517.00	64.38
20 ft Multi Axle Trailer (31/35/37 MT)	5625.00	67.21
20 ft Triple Axle (40 MT)	5771.00	70.22
40 ft Double Axle (35 MT)	7033.00	73.34
40 ft Multi Axle (40 MT)	7360.00	75.62

Cost tables were developed through analysis of important components of the automobiles under study throughout the product life cycle. The standard cost of operation of container trailers were arrived from these cost tables.

3. This scheme has been introduced to promote Coastal Shipping and to reduce the congestion on roads. The Kerala Government approved the operational incentive @ 50% of the road transportation cost to the ports of Kollam/ Beypore/ Azhikkal at the rates prevalent form Cochin Port/ Vallarpadam Container Terminal. As per G.O.(Rt) No.308/2020/F&PD dated 04/06/2020 the incentive for Coastal Shipping has been fixed at the rate of 10% above the road transportation cost and as per G.O. (Rt) No.38/2021/F&PD dated 23/01/2021 the same was extended for another one year from 23.01.2021. As per the Government Order read G.O (Rt) No.513/2021/F&PD dated 08/10/2021 the sanction was accorded to disburse the operational incentive per loaded containers as per the table given below for the extended period and also ordered that a minimum of 20% of the incentive should be shared with the traders/exporters/importers so as to promote the overall coastal shipping activities in the State.

Table 3.2 Proposed incentives for 20 Feet and 40 Feet loaded Containers

Sl. No.	Vallarpadam to various destinations	Proposed incentives for 20 Feet loaded Container	Proposed incentives for 40 Feet loaded Container
1.	Kochi to Beypore Port	12,790/-	16,627/-
2.	Kochi to Azhikkal Port	20,774/-	27,007/-
3.	Kochi to Kollam Port	10,200/-	13,259/-

Source: Government Order read G.O (Rt) No.513/2021/F&PD dated 08/10/2021 of Kerala Government

4. Further the GO.(Rt.) No. 51/2022 F&PD Thiruvananthapuram dated 02/02/2022, extended the incentive scheme, sanctioned as above, for a further term of one more year w.e.f. 23/01/2022, so as to attract the shipping trade and vessel operators in connection with the coastal shipping movement in the State. The NATPAC study report is attached as Annexure-IV. The orders of the Kerala Government in this regard are also attached in the same Annexure.

5. The revival of such schemes can be made and the same may be implemented at different states. This particular scheme in connection with the coastal shipping movement is based upon localised study and applies to specific port and its limited hinterland. This study tried to find out the actual amount by considering various fixed cost, variable costs and semi variable costs. Although, such localised schemes may be suited to a particular locality, it's implementation to other localities may be challenging.

6. Such type of scheme can be prepared by studying the existing characteristics and different requirements at different ports and their hinterland to derive the real benefits. The needs of the trade and actual local conditions have to be considered in detail before applying such schemes to other localities.

C. Policy for reimbursement of freight subsidy for distribution of Subsidized fertilizers through Coastal Shipping or/and inland waterways

1. This policy allowed the movement of fertilizers through coastal shipping/ inland waterways up to the rake point in the destination district to make it qualify for reimbursement of freight subsidy under primary movement. If a manufacturer is moving the fertilisers through multi-modal transportation, which includes coastal shipping/ inland waterways, and the manufacturer decides to move the fertiliser from the discharge port directly to the destination

district by road, then the entire multi-modal freight would be considered as primary movement and freight subsidy would be restricted to the railway charges or the actual freight incurred whichever is less. In such cases, there is no scope of secondary movement and hence, no scope of secondary freight subsidy payment.

2. In case, the fertiliser company chooses to transport fertilisers from unloading port to the nearest rake point in destination district by railway and then transports fertilisers further by road, the entire multi-modal transport up to the railway rake point would be treated as primary movement and road movement beyond rake point would be treated as secondary movement. The restriction on freight subsidy for secondary transportation of Urea would remain as per extant policies and freight subsidy for secondary movement for P&K fertilisers would continue to be inadmissible as per extant policies in this regard. The salient features of the policy have been given in the OM issued by Department of Fertilizers vide No. 23011/10/2016-MPR dated 18th September 2019. The copy of this policy is attached as **Annexure-V.**

3. Only the movement of indigenous subsidized fertilizers (Urea and P&K fertilizers) through coastal shipping/ inland waterways will be eligible for payment of freight subsidy at this stage. Such type of subsidy is not available for the movement of imported fertilizers. The viability gap funding can be explored to extend the freight subsidy for the movement of imported fertilizers with the strict checks and controls.

D. Marco Polo II programme in Europe from 2007 to 2013, as a successor to the Marco Polo I (2003-2006) and (Pilot Actions for Combined Transport) PACT (1997-2001) programmes in Europe.

1. Marco Polo II programme was in force from 2007 to 2013, as a successor to the Marco Polo I (2003-2006) and (Pilot Actions for Combined Transport) PACT (1997-2001) programmes in Europe. The programme was conceived to provide operational support to transport and logistics entities in view of addressing market failures causing imbalances and inefficiencies in the European freight transport sector, especially due to the dominant position of the road transport.

2. Its main objectives were to reduce congestion and to improve the environmental performance of the freight transport system. It thereby contributed to an efficient and sustainable transport system which provides EU added value without having a negative impact on economic, social or territorial cohesion. Most of the project types were assessed and paid on the basis of quantifiable results, such as a modal shift actually being achieved and freight traffic being avoided in the European transport network. Marco Polo II allowed for a wider geographical coverage by supporting actions operated not only between the EU countries but

also between at least one EU country and a nearby non-EU country. A total budget of €435 million was made available to fund five types of action: modal shift, catalyst, common learning, motorways of the sea, and traffic avoidance. The actions were selected through yearly calls for proposals.

3. The Marco Polo II programme was designed to shift freight from the road to more environmentally friendly means of transport and to increase efficiency of transport operations by avoiding unnecessary traffic and empty runs. The programme aimed at enhancing inter modality by making better use in the transport system of the existing resources by incorporating short-sea shipping and rail and river transport into the logistics chain. EU financial assistance had the form of grants.

4. For most project types, it was based on the number of ton-kilometers transferred from the road to other means of sea or land transport or the number of vehicle-kilometers of road freight avoided. The objective was to reward high-quality projects. The EU grant could not lead to any distortions of competition. EU financial assistance for the various actions is limited to a maximum of 35% of the total expenditure necessary to achieve the objectives of the action and incurred as a result of it. In the case of common learning actions, the ceiling is 50%.

5. Such type of programme can be studied and implemented in various areas of countries by providing the viability gap funding in the initial phases for some specific projects. Such type of sector specific or cargo specific viability gap funding projects can be studied and implemented at some locations.

6. The copy of the Regulation (EC) No 1692/2006 of the European Parliament and of the Council of 24 October 2006 establishing the second Marco Polo programme for the granting of Community financial assistance to improve the environmental performance of the freight transport system (Marco Polo II) and repealing Regulation (EC) No 1382/2003 (OJ L 328, 24.11.2006, pp. 1-13) is attached herewith as **Annexure-VI.**

CHAPTER 4

RO-RO-ROPAX SERVICES OPERATING AT GHOGHA TO HAZIRA IN GUJARAT

1. Roll-on/roll-off (Ro Ro or ro-ro) ships are cargo ships designed to carry wheeled cargo, such as cars, trucks, semi-trailer trucks, trailers, and railroad cars, that are driven on and off the ship on their own wheels or using a platform vehicle, such as a self-propelled modular transporter. This is in contrast to lift-on/lift-off (Lo-Lo) vessels, which use a crane to load and unload cargo. RORO vessels have either built-in or shore-based ramps or ferry slips that allow the cargo to be efficiently rolled on and off the vessel when in port. While smaller ferries that operate across rivers and other short distances often have built-in ramps, the term RORO is generally reserved for large oceangoing vessels. The ramps and doors may be located in stern, bow or sides, or any combination thereof.

2. Need of RORO Service: The RORO service is needed for the below mentioned reasons;

2.1 It will support to government initiative of go green and also support sustainable development. RORO service will help to reduce environmental damages.

2.2 In will enable integrated IT (Information Technology) system that will allow to coordinate truck movement by the coast.

2.3 Usage of this service will reduce emerging global warming and frequent climate changes due to it.

3. Other advantages include such as reduction in usage of fossils, reduction in environmental damage, reduction in on road traffics and threats to human societies.

4. Challenges and Suggestive Measures: Following are some of the issues and challenges faced by this sector and there are also some suggestions for further improvement of the same. The details are given in the table below;

Table No. 4.1 Issues, challenges and measures suggested to improve the RO-RO Services

Sr. No.	Issues and Challenges	Suggestive Measures
4.1.	**Insufficient parking space**: These service will require proper space for parking of vehicles and therefor it will be difficult to make each and every port agree to allot particular	The ports are required to allot some parking space near the port. Further, un-used or less than ports present in many states can be utilized as parking space. It will create win-win situation for

	space of land free of cost or at concessional rate.	them as it allows states to generate income and for ports it will be add-on advantage.
4.2.	**Lack of monetary incentive**: - The business will always seek some extra monetary benefits whenever they are adopting new means of transportation. Therefore, it is necessary for the ministry to provide adequate benefits to boost the fleet owners.	The monetary incentives will boost-up the Ro-Ro service will work as a measure to reduce transportation cost and reduce overall cost of inputs. The other measures like reducing duty for Coastal Bunker Fuel or by providing carbon credits & incentives for promoting GHG emission reduction may also be explored.
4.3.	**Multiplicity of Documentation: -** Need of Multiple documents is less attractive to the consignor/fleet owner to adopting new mode of transportation as this will ultimately lead to more work for them and such hefty procedures will also lead to consumption of more time.	The Ro-Ro service providers shall be allowed necessary relaxations in filling of documents i.e. simplified form, etc. Further, appropriate relaxation shall be extended in terms of checking by custom authority as it will consume time which will ultimately lead to delay in provision of services.
4.4.	**Decentralization of authority by fleet owners**: - The choice of using Ro-Ro service by the drivers will provide decentralization of decision for them. The individual truck driver owner will never think about what will be saving in fuel cost, what will be depreciation that truck and tyres will suffer, and what will be other matter impacting business financially. It will be challenging to change this decision-making process from decentralized mode to centralized mode.	All the owners shall be guided by publishing necessary advertisements and explaining the potential benefits of RO-RO service and also informing them about increase in life of their vehicles. Ro-Pax vessels will attract more passengers and it requires an awareness among the niche market. There should be less accommodation for passengers do deal with high operating costs.
4.5.	**Inadequate Infrastructure at ports: -** It is found that many ports are having inadequate infrastructure to provide the boost to Ro-Ro service.	The committee can be set up to study and advice in relation to identifying the ports for infrastructure development and raising the adequate funds for such development.
4.6.	**Non-mandatory to move certain volume of vehicle by coastal routes**: - It has not been made mandatory to have certain percentage of vehicle movement through Ro-Ro service by coastal	There is requirement to mandate certain percentage of vehicle movements through Ro-Ro service and the government shall make the provisions in this regard. Further, use of Ro-Ro coastal vessels for the industrial corridor along the coastline of India will avoid separate cargo

	routes to avoid environmental problems such as climate change and global warming constituting existential threats to human societies, to damage to the environmental, etc.	handling system at every port and door to door delivery would be possible with the same truck.
4.7.	**No Fiscal benefits to coastal Ro-Ro operators: -** Various fiscal benefits like reduced interest rate, collateral free overdraft facility are not presently available to RO-RO operators.	There is need of extending some additional fiscal benefits like reduction in rate of interest, collateral free borrowing, ease in terms of compliance form government side to boost-up the industry.
4.8.	**Lack of awareness in market about the service and inadequate IT enabled integrated system:** A robust IT structure will allow the service providers to provide services at adequate benchmark level. Further for rapid growth in terms of customers it will require awareness about potential benefits.	There is need to develop a robust IT enabled integrated system within coastal shipping community, truck associations and various truck operators to allow them to ply to other destination through coastal waters instead of using congested road system to deliver the cargo. Further, there is a necessity to attract passengers in Ro-Pax vessels., There should be much awareness among the niche market through different measures and there should be less accommodation for passengers do deal with high operating cost.

5. It was informed that the Ro-Ro-RoPax services operating at Ghogha to Hazira in Gujarat has boosted the business & increased the connectivity. The journey time is shortened from 10-12 hours to 3-4 hours between Saurashtra and South Gujarat and it has saved time and expenses. It was discussed that Ministry of Ports, Shipping and Waterways (MoPSW) is promoting the Ro-Ro/Ro-Pax/Ferry waterway transportation which has lower emissions compared to other modes of transport for the same amount of cargo. Also, there is a significant time and cost saving compared to the traditional transportation modes. Concurrently traffic congestion on road/railways, noise pollution and the accidents on the roads will also get reduced.

6. Such water-based transportation service is an effective measure to lower the logistics costs, reducing travel time and promotion of coastal shipping on several feasible routes. In order to provide some quick respite to this sector from the impact of Global Increase in Price of Fuel, MoPSW has directed all Major Ports to exempt all berth hiring and vessel related charges being currently levied to the Ro-Pax/Passenger Ferries for the next six months with

immediate effect from 24th July 2022., Ministry of Finance and Corporate Affairs and Ministry of Petroleum and Natural Gas have been requested to extend their support for this sector by reducing taxes and price of the Fuel respectively. MoPSW has also requested all the states to lower their rates of VAT over the HSD used by this sector. The Gujarat government has provided the waiver of VAT on the diesel fuel and simplified the processes for getting those benefits. Such type of measures can be adopted as viability gap funding for improving the transport services on the coastal routes. In order to promote the surface water transportation and to encourage the newly emerging inland passenger and vehicle movement eco system of the country, the various issues of rising Global Marine Fuel prices and their bunker pricing, ineffective GST input credit for Ferry Operators, growing difference between the cost of Marine Fuel and Retail Fuel should be looked into and necessary consideration should be given to promote this sector. Few monetary incentives along with boost-up to Ro-Ro service will work as a measure to reduce transportation cost which will ultimately help to reduce overall cost. The benefits may be provided by reducing duty for Coastal Bunker Fuel or by providing carbon credits & incentives for promoting GHG emission reduction. The copy of the news of the PIB is attached herewith as Annexure-VII.

CHAPTER 5

IMPORTANT MEASURES RELATED TO TAXES AND FUNDING FOR DEVELOPMENT OF COASTAL SHIPPING IN INDIA

1. In continuation of various issues deliberated in the previous chapters, we have to see what more factors like various taxes and issues in relation to funding are holding back the coastal shipping sector in India. These issues are discussed in detail in this chapter.

2. One of the primary issues that ails Indian shipping is the fact that costs are too higher to provide the service of shipping from an Indian company than it does to import such a service. This is the basic problem. The higher costs of operating an Indian shipping company does not arise from the 'operating' costs of the company, i.e. the components which go into operating a vessel. In fact, most Indian companies are able to operate their ships efficiently. What spikes the cost of operating an Indian ship are the taxes imposed on it which are not imposed on the same service when provided by the foreign ship and the cost of capital and debt, which is considerably higher than that which is available to its peers in the foreign flag. This makes the former non-competitive in the fiercely competitive international freight market.

3. All consumers of goods or services are required to, normally, purchase and use goods or services that are available locally. In case a good or a service is imported, sufficient countervailing legal action kicks in which ensures that the import is made costlier than the local supply. In case of 'dumping,' anti-dumping duties are imposed.

4. Curiously, nothing of this kind applies to shipping, and it is not known why. What worsens the situation is that Indian companies both PSUs and private are allowed to import shipping services into India from a foreign shipping company without any tariff. This actually works in the reverse direction, diverting cargo away from Indian companies who pay taxes in India, employ only Indian seafarers, train Indian cadets and contribute in myriad ways to the Indian economy. While import of shipping services attracts no tariff, importation of all inputs by an Indian shipping company to provide Indian flag shipping service, namely goods (including the ship itself), the other goods (stores, spares, fuel etc.) and services that are needed to provide an "Indian flag shipping service" are taxed. Similarly, the output services, i.e. transportation by sea between two Indian ports, is exempt from tax, if it is provided by a foreign shipping company. This points towards the gap between India's trade policy in general and

domestic regulatory regime which results in more favourable treatment to foreign service suppliers in particular.

5. All these policy logjams effectively incentivize import of shipping services rather than promoting, facilitating setting up and expanding the use of Indian shipping services.

6. Often an excuse is forwarded that Indian ships enjoy an advantage of the 'Right Of First Refusal' (ROFR). Operationally, it means that in a freight bidding process, if the Indian company is not the lowest bidder, it may be given the said cargo for transportation provided it matches the rate offered by the foreign shipping company.

7. What this completely overlooks is that when Foreign ships and Indian ships both compete for the same Indian cargoes (both coastal and EXIM), the higher operating costs of Indian shipping companies arising due to taxation and sovereign rating of India which affects the cost of capital, makes it impossible to match the lower costs of foreign flag ships. Recently, Oil PSUs opposed a proposal to ask foreign ships to flag in India since they said that this would increase the cost of a foreign ship by more than USD 5000 per day!

8. There is a need to remove operating infirmities which impact the competitiveness of Indian shipping. The operating parameters listed in the table below adversely impact the competitive ability of Indian ships and it needs to be brought down on par with foreign ships.

Table No. 5.1 The operating parameters which adversely impact the competitive ability of Indian ships and need to be brought down on par with foreign ships

Issue No.	Operating parameters for a coastal voyage	Indian flag ship	Foreign flag ship	Competitive advantage with Foreign flag ships
1)	Bunker rate	Costlier due to higher base rate and local taxes	Ability to buy cheaper fuel abroad; no taxes	Suggestion: Cost of bunker fuel available to Indian vessels (Coastal or Foreign going) should be on par with international rates.
2)	Seafarers' wages taxation	Wages of Indian seafarers working on Indian flag ships in coastal waters are subject	No tax on wages earned by Indian or Foreign seafarers working on foreign flag ships operating in	Costs of operating Indian flag ships is higher than foreign flag ship.

		to Income tax and TDS provisions.	coastal waters of India even for Indians working on foreign flag ships on the coast	Wages constitute about 33% of the Opex of a vessel.
3)	Direct tax – Tonnage Tax Rate	Rate of tonnage tax is higher in India. High rate of tax on income OR Tonnage tax + training obligation	Lower rate of tonnage tax	For example: For an Aframax tanker, we would pay Rs.12.5 lakhs in India but about 6400 Singapore dollars (about 3.9 lakh rupees)
5)	Direct Tax – Cadet Training Cost	Free Cadet training is being provided by Indian Ships under Tonnage Tax Scheme – We train 1.5 cadets for every 10 persons on board our vessels	No such training obligation on foreign ships by their maritime administration	Competitive advantage with Foreign Flag ship
6)	IGST on import of ships	5% on value of ship	No GST on acquisition of ships in their country. Even if the foreign ship is operating in India, no GST is levied	Competitive advantage with Foreign flag ship
7)	Inability to offset input GST on goods procured	5% of the value of the goods (Bunkers, stores, spares) gets blocked for an Indian company	It does not apply for Foreign Flag Ships.	Competitive advantage with Foreign flag ship
8)	GST on (freight) transport of cargoes between two Indian ports	5% on the value of the service	It does not apply for Foreign Flag Ships as no GST is payable on coastal transport of cargos between two	Competitive advantage with Foreign flag ship

			Indian Ports provided by foreign flag vessel.	
9)	GST payable on maintenance, repair or overhaul (MRO) services procured overseas	From June 2021, the Indian flag shipping industry must pay 5% GST on Reverse charge basis on the dry docking and repair services procured abroad.	In most countries ships are exempt from application of GST as it does not apply to foreign flag ships. Foreign ships are able to get MRO services in India without payment of levy.	Competitive advantage with Foreign flag ship
10)	5% IGST payable to Customs on the sum of (a) dry docking expenditure incurred outside India, plus (b) cost of insurance and (c) freight (to & fro)	Despite paying GST on Reverse charge basis on MRO services availed overseas, Customs require Indian ship to pay this amount again under IGST. This levy is payable a second time on the same MRO service on conversion of the vessel to coastal and this amounts to double taxation.	It does not apply to foreign flag ships, since almost all maritime nations do not apply GST to Ships.	Competitive advantage with Foreign flag ship
11)	Procuring drydocking services for statutory compliance	There is a 10% TDS payable on the drydocking bill of Indian shipping companies because it is being termed as a "technical service" and not as a repair service, which, in reality, it is.	It does not apply to foreign flag ships.	Competitive advantage with Foreign flag ship

9. Maritime Development Fund (MDF):

9.1. On the issue of funding and the high capital costs, Indian shipping industry needs a long-term funds at competitive rates as are available to global players. The maritime sector is directly exposed to global competition, and it is therefore necessary that the cost heads of the sector match those of international competition. The 'development fund' needs to be able to provide long tenure as well as low-cost rupee/forex loans at the very least.

9.2. The Indian shipping companies are directly exposed to global competition as both Indian and foreign companies compete for the same Indian coastal and import-export cargoes. Therefore, Indian shipping industry needs funds to purchase ships at rates on par with those available to international competition.

9.3. Currently, there is a great difficulty in obtaining funds from Indian banks. Those banks who do participate in the funding of shipping assets provide money at very high costs. When sourced from India the cost of rupee funds averages about 13.5% which are lent for about 7 years. In contrast, the competing foreign shipping companies can source funds at about 2-3.5% for about 10 to 12 years.

9.4. The impact of shorter tenure of loan funds on daily cash flows basis for is depicted in the below mentioned table;

Table No. 5.2 Impact of difference in interest rates and loan tenures

Impact of difference in interest rates and loan tenures						
	Loan amount (USD Million)	**Rate of Interest (%)**	**Tenure (in years)**	**Daily EMI (USD)**	**Scenarios compared**	**Difference (%)**
Scenario 1	$40	13	7	24,256	Betn 1-3	46.36
Scenario 2	$40	13	12	18,328	Betn 1-2	24.44
Scenario 3	$40	6	12	13,011	Betn 2-3	29.01
Source: INSA						

9.5. In the above case, when the scenarios 1 and 3 were compared on the basis of the loan tenures of 7 years and 12 years with interest rates of 13% and 6% respectively, it was found that the difference in the daily cost of repayment was 46.36%. The comparison of scenario 1

and 2 assuming loan tenures of 7 years and 12 years and the same interest rate that the difference in the daily cost of repayment reduced to 24.44%. Further, the comparison of scenario 2 and 3 assuming the loan tenure of 12 years in both cases and the interest rate at 13% and 6% respectively reveals that the difference in the daily cost of repayment is of 29.01%.

9.6. The availability of funds at applicable costs are variable in different economies. The details of availability of funds in different countries at different interest rates is mentioned in the table below;

Table No. 5.3 Interest Rates at different Central Banks - summary of current interest rates (18.03.2023)

Interest Rates at different Central Banks - summary of current interest rates (18.03.2023)	
USA (Dollar)	4.7 %
India (Rs)	6.5 %
Britain (Pound Sterling)	4 %
Japan (Yen)	0.1%
Source: *Global Rates, Reuters - India Money Market Rates*	

9.7. Indian banks currently provide debt funds with a tenor of 7 years at best. Resultantly, the daily cash flow requirements of Indian companies are almost double as that of a similar ship under the foreign flag. Yet both Indian and foreign ships have to compete for the same Indian coastal and EXIM cargoes, and the Indian shipping companies are expected to bid for Indian cargo within 20% margin to what is quoted by the foreign shipping company – to be awarded the freight contract under the ROFR mechanism.

9.8. Further, there are green targets for coastal and foreign going ships where India's aging fleet will need to be completely replaced in the next 3-5 years. For all these efforts, a Maritime Development Fund is the need of the day.

9.9. In addition, the global decarbonisation protocol must be met, and India must replace its assets with a younger fleet and/or equip old ships with new engines or fuel systems in order to meet the new requirements of decarbonisation. Indian flag shipping assets, valued at

approximately Rs. 90,000 crores must comply with these international industry standards or shut down!

9.10. Therefore, there is a need to ensure that long-term, low-cost funding is made available for acquisition of new and second-hand shipping tonnage to Indian shipping companies.

9.11. We have to see the need for a dedicated fund and how funding from the GIFT City and NIIF falls short. The below mentioned table will throw some light on the issue as to how the comparison between the Proposed Maritime Development Fund, Gift City or any other foreign bank or ECB funding and National Investment & Infrastructure Fund (NIIF).

Table No. 5.4 Comparison between the Proposed Maritime Development Fund, Gift City or any other foreign bank or ECB funding and National Investment & Infrastructure Fund (NIIF).

Sr. No.	Issues for comparison		
	Proposed Maritime Development Fund	**Gift City or any other foreign bank or ECB funding**	**National Investment & Infrastructure Fund (NIIF)**
1.	Developmental fund and not with 100% commercial intent	Commercial intent	Commercial intent
2.	To cater to small, medium and large shipping companies	To cater to medium and large shipping companies	To cater to medium and large shipping companies
3.	Rupee & dollar funding	Dollar funding only	Rupee funding only
4.	Can be structured to beat the sovereign rating of India	Not constrained by the sovereign rating of India	Constrained by the sovereign rating of India
5.	Will lend upto 90% of asset cost	Lends upto 65-70% of asset cost	**Does not lend to individual companies**. It lends to infrastructure projects; is a fund of funds; picks private equity in companies.
6.	-	-	It can invest into the proposed MDF
7.	Term of lending 10-12 years	Term of lending 5-7 years	-

8.	Can lend to coastal and EXIM shipping companies	Can lend to EXIM shipping companies only	-
9.	No withholding tax on interest repaid.	Withholding tax on interest repaid. (For ECBs)	-
10.	Proposed loan processing mechanism would be cheap	High all-inclusive costs if borrowed amount is upto 3-4 million dollars. (For ECBs)	-
11.	Proposed "go to financial institution" for all Indian flag shipping companies	Prefer to cater only to the well-established shipping companies	-
12.	Proposed rate of interest offered by MDF is expected to match as availed by foreign shipping companies	Rate offered (Libor+3.5 for ECB) is estimated to be higher than as expected to be offered by the proposed MDF	-
13.	The shipping company can be registered and can operate from anywhere in India to avail funds from the proposed MDF.	The shipping company has to be registered in GIFT City.	-
14.	Prepayment is an option that is available	Only part prepayment option is available for ECBs	

9.12. In the past, dedicated sectoral funds in India have effectively addressed the issues particular to a sector. Further, sector specific institutions like Power Finance Corporation (PFC), Rural Electrification Corporation (REC) have effectively supported the said sectors with a focused approach. They provide long-term funds to their focus sectors and have played a significant role in the development of these sectors. The common feature of some of these funds is to primarily provide long-term and low-cost debt or equity capital. All these funds have played important roles in development of the respective sectors. A few such sectoral funds launched in the past are as under:

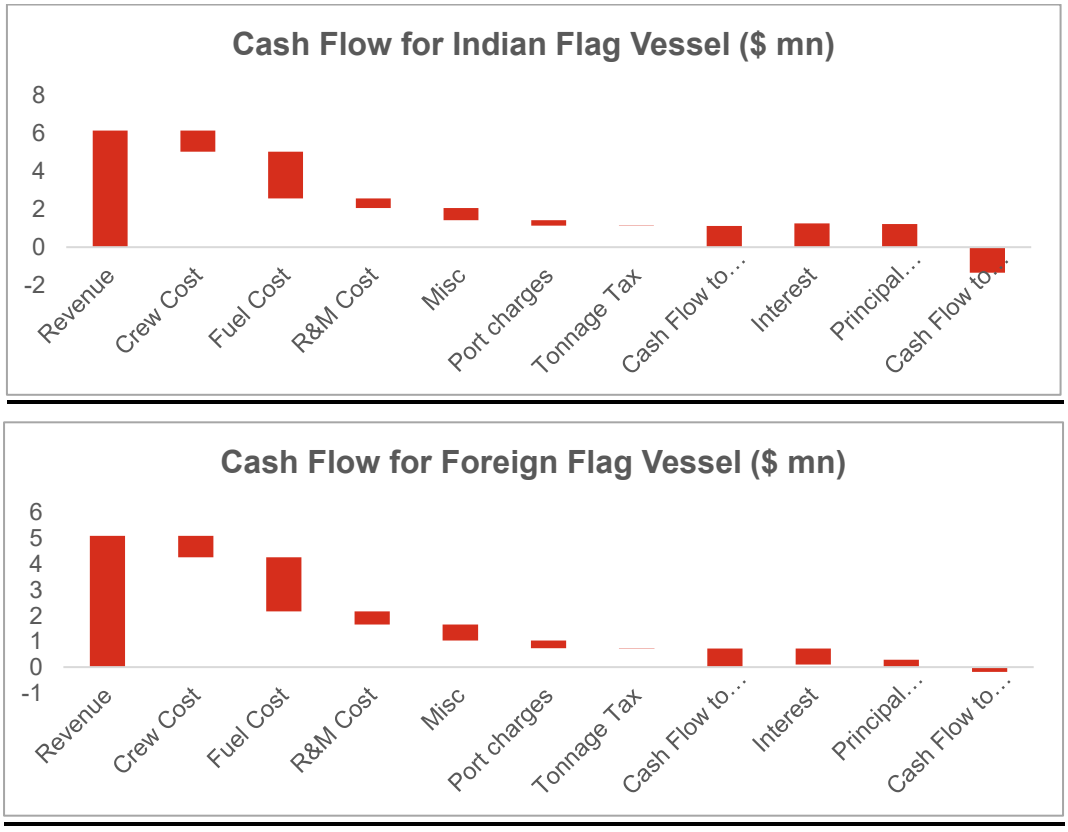
Table No. 5.5 Sectorial funds launched in the past

Sector	Institutional Support Mechanism
Railways	India Railway Finance Corporation (IRFC)
Highways	Central Road Fund
Steel	Steel Development Fund
Sugar	Sugar Development Fund
Textiles	Technology Upgradation Fund Scheme

9.13. The proposed Maritime Development Fund is expected to do the same for Indian flag shipping industry.

9.14. Despite the high cost of funding and the taxes being levied exclusively on Indian shipping companies – and proven disparity in input costs and taxes on output, the ROFR given to Indian ships is basis that its quote for freight is within a 20% margin as offered by the foreign shipping company and then for actual contract to fall in its kitty, it has to match the rate as offered by the lowest foreign shipping company. However, in order to maintain same Equity IRR for Indian flag owner, an Indian flag owner needs to charge ~20% higher bidding rate. The difference can be seen from the cash flow charts below;

Chart No. 5.1 Cash Flow for Indian Flag Vessel & Foreign Flag Vessel ($ mn)



CHAPTER 6

SOME OF THE OTHER IMPORTANT MEASURES FOR DEVELOPMENT OF COASTAL SHIPPING IN INDIA

1. Apart from the various issues discussed in the previous chapters, there are so many other very easy and implementable measures for development of coastal shipping in India. These measures are like low hanging fruits and can be implemented by having inter-ministerial discussions and finding more suitable solutions. Some of such measures are described as below;

1.1. Introduction of harmonized manning scales for Indian coastal vessels taking into account practical skills as well as STCW convention. Addressing the shortage of officers for operation of Indian coastal ships by introducing practical-oriented programs for upgrading skills of crew from traditional seafaring communities thereby promoting “Skill India”.

1.2. Identification of practical and cost effective alternatives to rigid IMO requirements of marine equipment manufacturing & servicing focusing on indigenisation and BIS approved products and services, thereby promoting "Make in India" and boosting the technical/electronic manufacturing & services capacity.

1.3. Reduction of fuel costs and emissions for coastal ships by using Bio-Fuels and other alternative cleaner fuels. Study technical feasibility of present coastal vessel engines using biofuels, identify supply & pricing structure of biofuels at various ports. Run a pilot program for a port to use biodiesel in their tugs and harbour crafts.

1.4. Establish a standardised & simplified process for financing coastal vessel acquisition by MSMEs ship owners through the newly established ship finance/leasing companies in GIFT city. Take into consideration the revamped MSME credit guarantee scheme of GOI.

1.5. **Green Channel for Coastal Cargo:** All port IN/OUT Gates are common for Coastal and EXIM containers and due to long queues the turnaround time for Coastal truck is increasing. Providing same gates for Coastal and EXIM containers will add cost for coastal cargo first mile / last mile movement and reduces the modal shift of cargo to coastal trade. Therefore, it is required that all port gates IN/OUT - must have separate lane at gate (Out of Many lanes) only for Coastal traffic to ease of movement and faster turnaround to encourage coastal movement of goods.

1.6. **Coastal Container Identification:** As per Customs notification, "For Coastal Carriage Only" sticker is required to be displayed on coastal containers. However, this condition is not followed strictly by the operators. As Customs officers on duty can't recognize the coastal containers by viewing Stickers declaring "For Coastal Carriage Only", they are treating the coastal containers similar to that of EXIM container and thereby following all the In/Out process and increasing turnaround time and cost. It is suggested that application of Color Code Sticker for coastal containers like "Green" will avoid this problem and improve the turnaround time.

1.7. **Coastal Cargo complex:** Some ports are allowing DOCK Stuffing / Destuffing facilities in their existing bonded facilities in nearby areas for the coastal cargo till Coastal Cargo complexes are built at all important locations. As Coastal Cargo is required to be handled at non bonded area, Coastal users have to move cargo to separate place for Dock stuffing / destuffing activities. It causes delays in the cargo movement, adds transport and additional labour costs and leads to inefficiencies in movement. There is requirement for all Ports to identify suitable place for coastal cargo complex on PPP mode and create adequate infrastructure needed for handling variety of coastal cargo. This will support to boost coastal trade and reduce the overall cost and time.

1.8. **Coastal Multimodal Cargo Document:** It is noticed that presently there is no legal Carriage document / instrument in place. Due to non-availability of legal framework / document like Bill of Lading in EXIM, Cargo Insurance claims, Damage claims are not received in spite having cargo transit insurance by Shippers & Shipping Agents. The Freight Forwarders don’t have any control on their payment collections as no document is available for carriage contract. This leads to increase in bad debts. The government along with the stakeholders are required to create a Coastal Multimodal Document - Carriage contract including Freight and Insurance liabilities. There is requirement for the trade to prepare such document and submit the same to the Government for further follow up.

1.9. **Compulsory Modal Shift of cargo on viable coastal port:** It is noticed that there is less efforts on awareness of Coastal mode availability to users and only Service providers are taking efforts to bring modal shift of cargo for their deployed tonnage / ships / services. It is found that the Road and Rail are always the popular modes of transport. Even in all PSU's, Cooperatives, Corporates issuing Tenders, Transport contract are having only Road, Rail modes as an option for transport needs. They must add Coastal mode of transport in their all tenders, contracts, etc. Every PSU's, Cooperatives, Corporate companies and other users must understand importance of using Waterways. They must think Coastal mode as an option for

commercially viable for more than 700 Kms distance cargo movement and consider their responsibility for environment and divert to coastal mode. In support of this there is need to design a policy for all users in such a way that all must use 5-10% cargo movement using Coastal shipping and waterways. It is viable for more than 20 states.

1.10. **Port Ground Rent Charges:** All ports are charging Coastal ground rent charges which are very high and thus adding cost. The coastal sector which is in direct competition to Rail/Road causing delayed deliveries and increasing the total freight cost. All PPP Port terminals are built considering to serve EXIM cargo projections for lease period and they have never considered coastal cargo contribution while making investments. It is pertinent for them to allow minimum 14 days free for coastal cargo and charge reasonable tariff similar to other Major port tariffs.

1.11. **Coastal Awareness Program:** There is no awareness program for Modal shift of cargo in place presently. It is suggested to make a team of practitioners involving the coastal stakeholders to study the potential, participate in the awareness program and conduct road shows at prospective locations.

1.12. **Creating Skilled Workforce:** It is found that presently no qualified coastal trade professionals are available. It is proposed to hire graduate trainees and Management trainees for studying Coastal Potential, making Road shows and conducting awareness programs. They will get trained by coastal practitioners and they can spread the awareness of coastal mode. We suggest that MOPSW should issue them experience certificate for their internship or their contribution. This will encourage youngsters to participate coastal trade growth and also it will create more job opportunities.

1.13. **Inland Water Transport (IWT) Integration:** It is imperative to include IWT within this agenda. There is a need of working jointly on Coastal & IWT to ensure seamless multimodal connectivity and enhance cargo movement efficiency. Additionally, a cargo promotion scheme, similar to the one implemented for IWT—with necessary updates should be introduced for coastal shipping. This will ensure direct benefits to cargo owners, encouraging stakeholders to shift cargo toward coastal shipping.

1.14. **PSU Cargo Diversion Initiative**: All Public Sector Undertakings (PSUs) must be encouraged, through their respective ministries including Food Corporation of India (FCI), Fertilizers, Petroleum, etc. to register their logistics requirements under the ‘Gati Shakti Logistics Department’. Additionally, PSUs must allocate a defined percentage of their cargo to coastal shipping and IWT. This will help to reduce their logistics costs, increase cargo share

for Coastal & IWT as an ecological and economical mode of transport and strengthen sustainability and efficiency in India's cargo movement.

1.15. **Support for Domestic Container Manufacturing**: To promote Make in India all coastal operators must prioritize the procurement of containers from domestic manufacturers. This initiative will boost indigenous production capabilities, reduce dependence on imports, and support India's logistics sector growth.

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