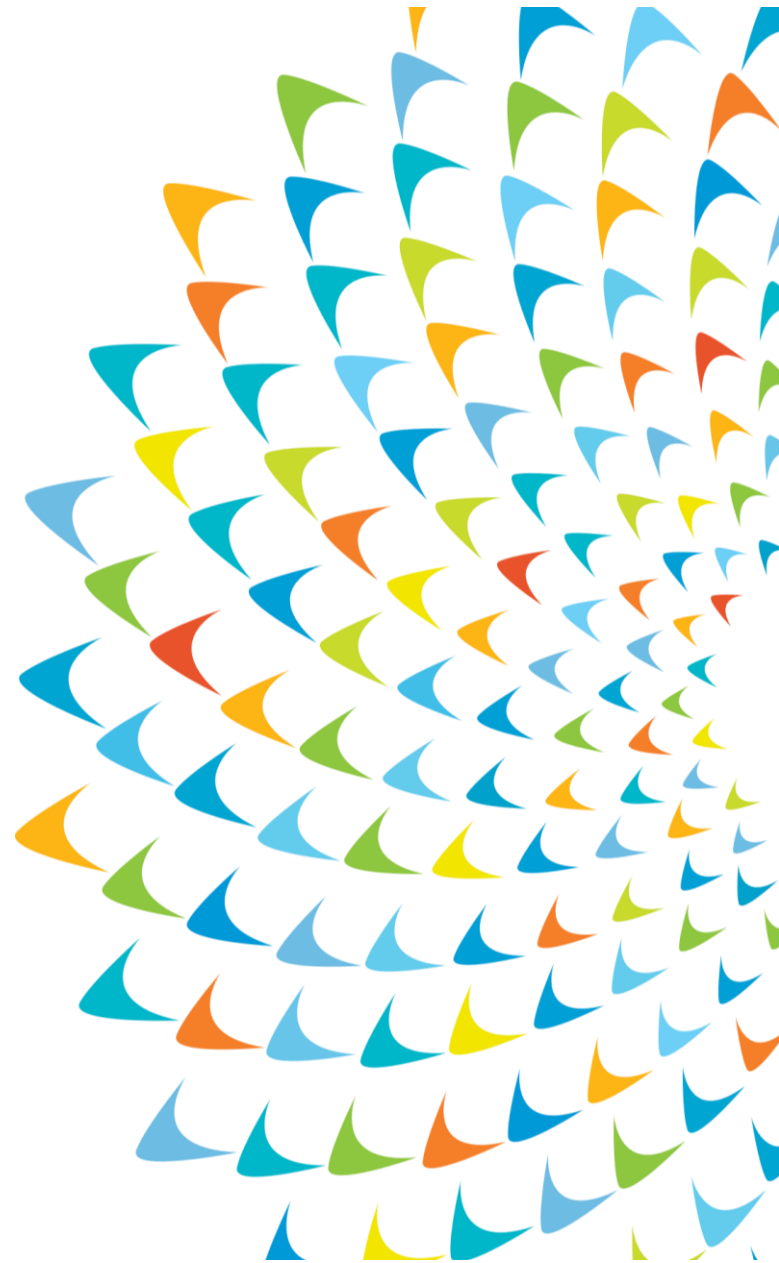




Action plan for Coastal Shipping

17th July 2019

Asian Development Bank





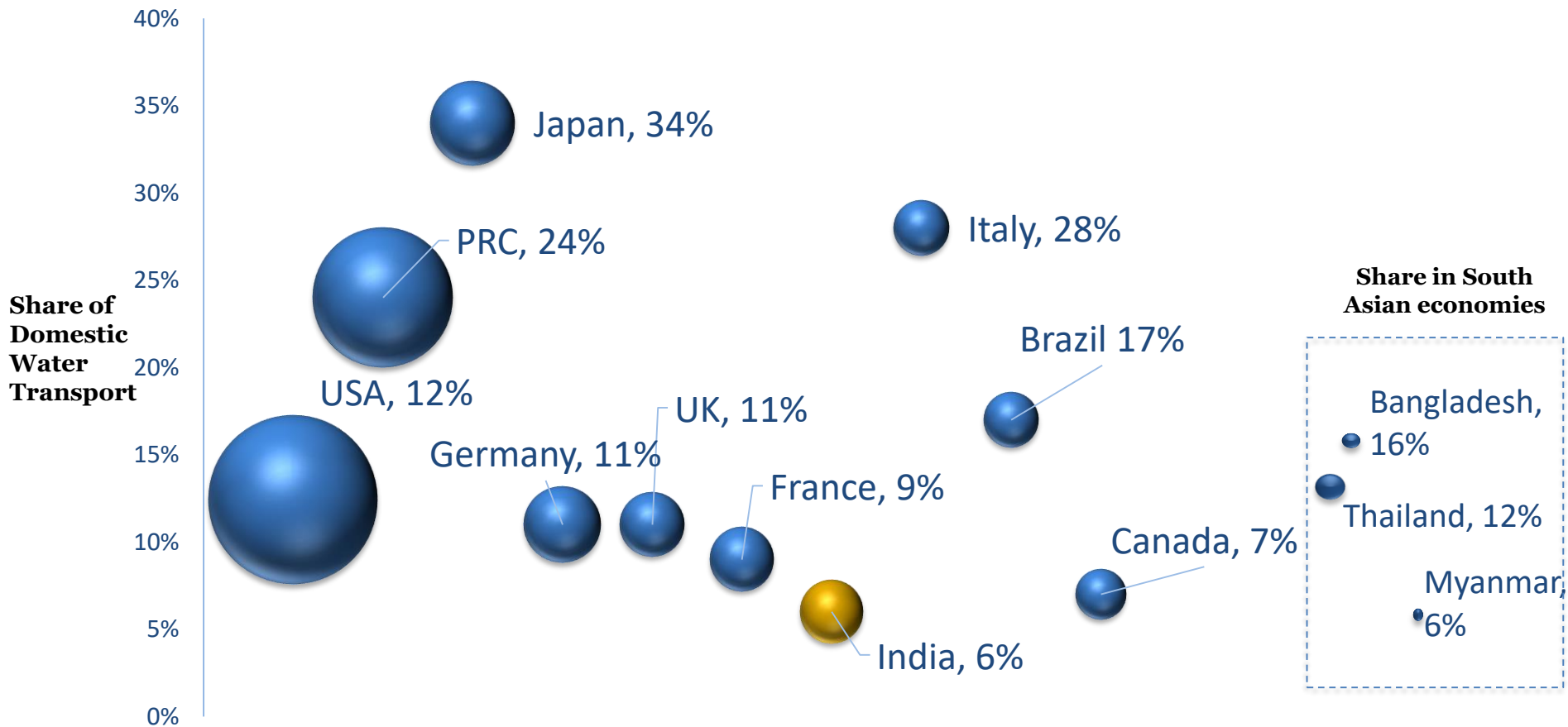
Study objective

- *Understand **issues impacting growth** of coastal shipping*
- *Assess where coastal shipping can be **most efficient and cost effective** mode of transport for **end user***
- *Develop **policy, infrastructure and process** interventions that can lead to reduction in logistics cost through promotion of coastal shipping*



India's share of domestic water transport in total freight movement among the top 10 economies

Domestic Water Transport Share in top economies



Size of the circle shows economy size in terms of GDP

Domestic water transport includes coastal shipping and Inland waterway

PRC- People's Republic of China

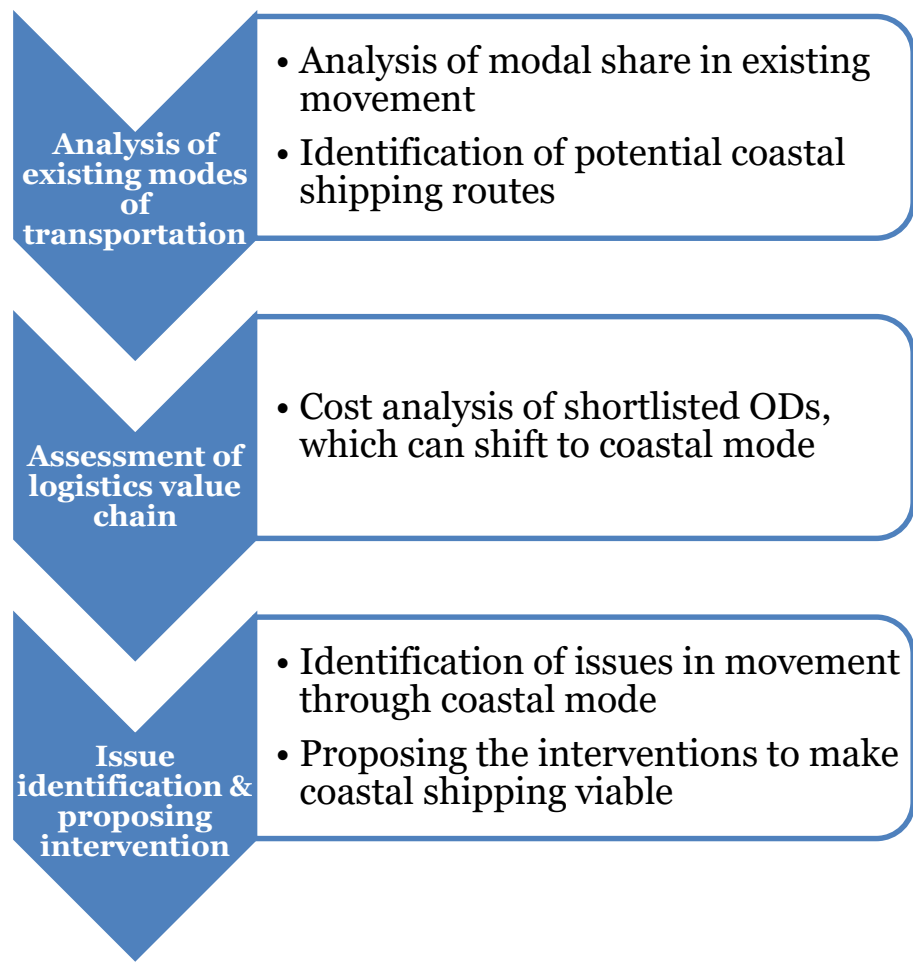


Coastal shipping action plan study was initiated by the Ministry to identify actionable interventions

Key commodities analysed

- Coal
- Steel
- Cement
- Automobile
- Foodgrain
- Fertilizer
- POL
- Cotton
- Sugar

Key areas analysed





100+ industry interactions have been conducted, along with multiple review workshops with major stakeholders

Industry interactions

7 stakeholders across **coal**, 3 players for **fertilizers**, 4 for **automobiles**, 7 for **Steel**, 10+ for **Cement**, 2 for **Cotton**, 1 each for **Sugar**, **POL & Foodgrains**, 14 **Logistics Service Providers**, 15+ **Ports**, **IWAI & Eastern Coastal Railways**

Multiple workshops have been conducted with various industry associations and government bodies to get inputs on issues identified and interventions proposed



Meeting with Authorities & Associations

- DG Shipping
- Department of Logistics
- FCI (Foodgrains)
- FAI (Fertilizers)
- CMA (Cement)
- Indian Sugar EXIM Corporation (Sugar)
- Customs
- INSA
- MANSA
- CFS Association
- Wooden Boat Association
- ICC Shipping Association

Workshops conducted

- Issue identification workshop for all the major stakeholders of coastal shipping, Workshop for Cement, Automobile & Steel players, Freight forwarders
- Department of Logistics for various commodities



Coastal shipping has certain considerations impacting its competitiveness

1 Coastal Shipping is essentially a **multi-modal movement** with high dependence on inland connectivity and transshipment efficiency



2 India's **peninsular geography** leads to higher distances for cross-coast coastal movement as compared to Railways & Road movement



3 The existing set-up of industries and consumption centres away from coast leads to **high first mile & last mile** costs, impacts competitiveness of coastal mode



4 **Empty returns** costs impact end user much more than rail and road

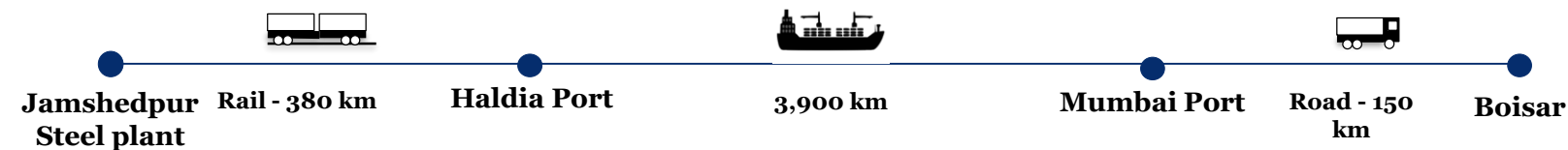


5 Higher **transportation lead times** for coastal mode makes it a less preferred choice for some time-sensitive cargoes

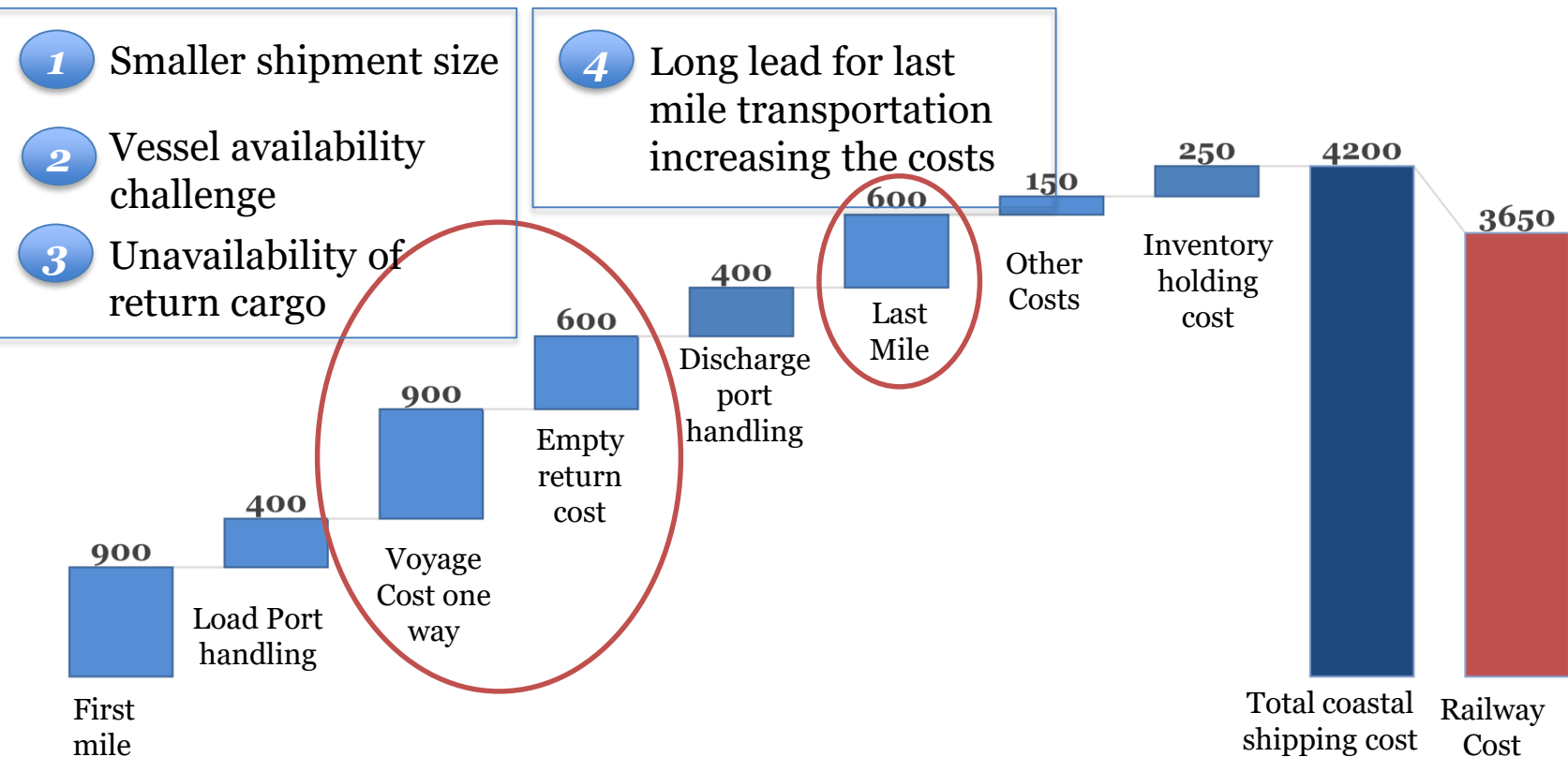


For break bulk commodities like steel, unavailability of return cargo can impact viability of coastal shipping

Logistics cost for movement of steel from Jamshedpur to Thane



Key issues

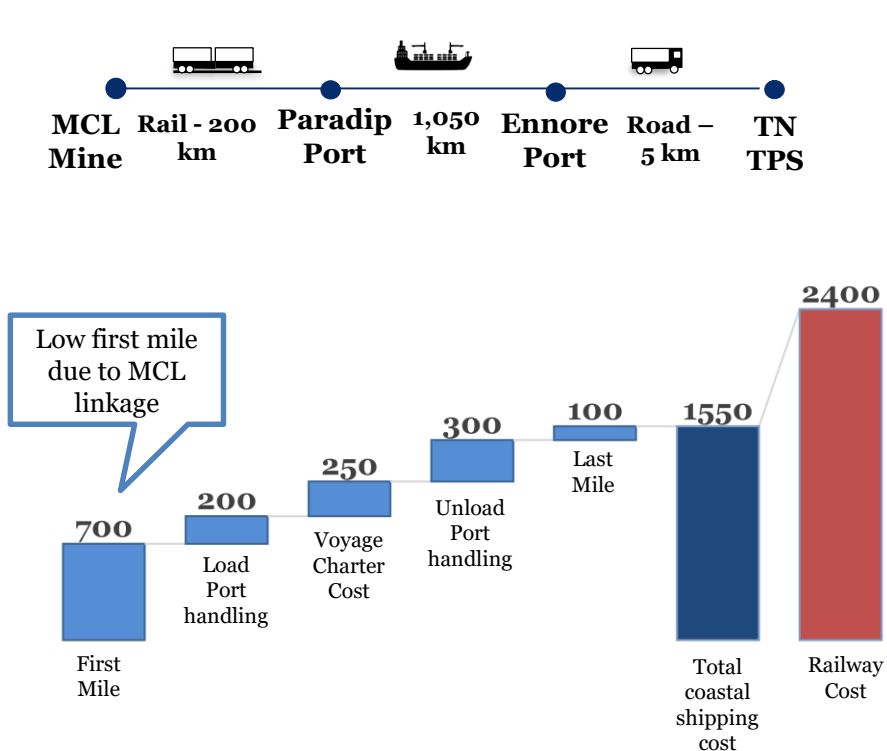


Post interventions, coastal shipping cost can reduce to 3,300 INR / MT

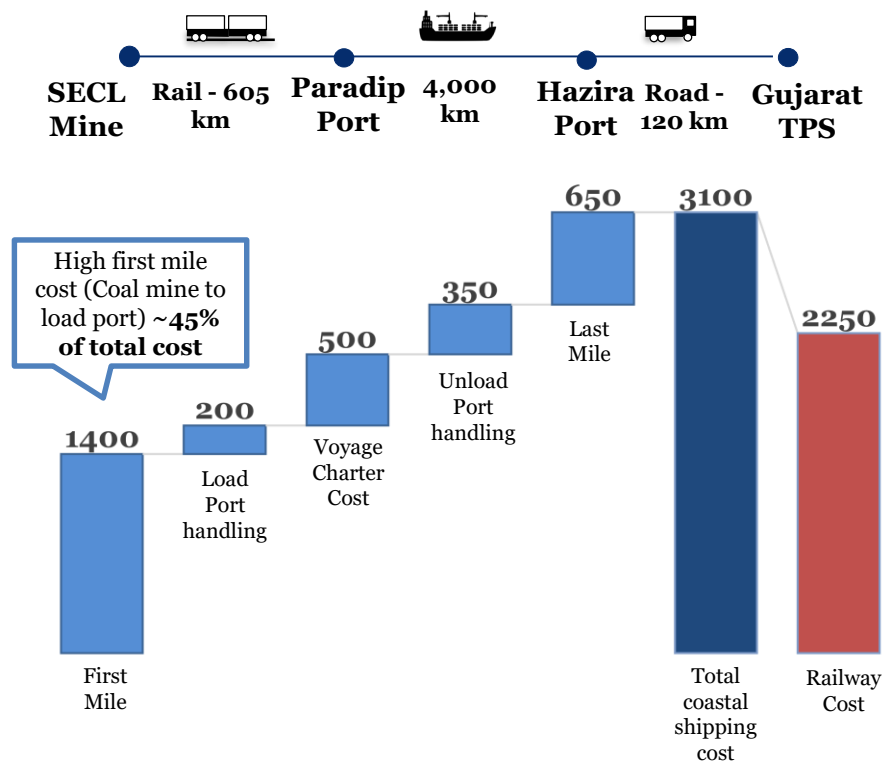


Dry bulk cargo like coal, coastal shipping viability significantly impacted by first and last mile costs

Logistics cost for movement of coal from MCL Mine to Thermal Power Station in TN



Logistics cost for movement of coal from SECL Mine to Ukai Thermal Power Station, Gujarat



- 1 High first & Last mile costs
- 2 Infrastructure capacity constraints

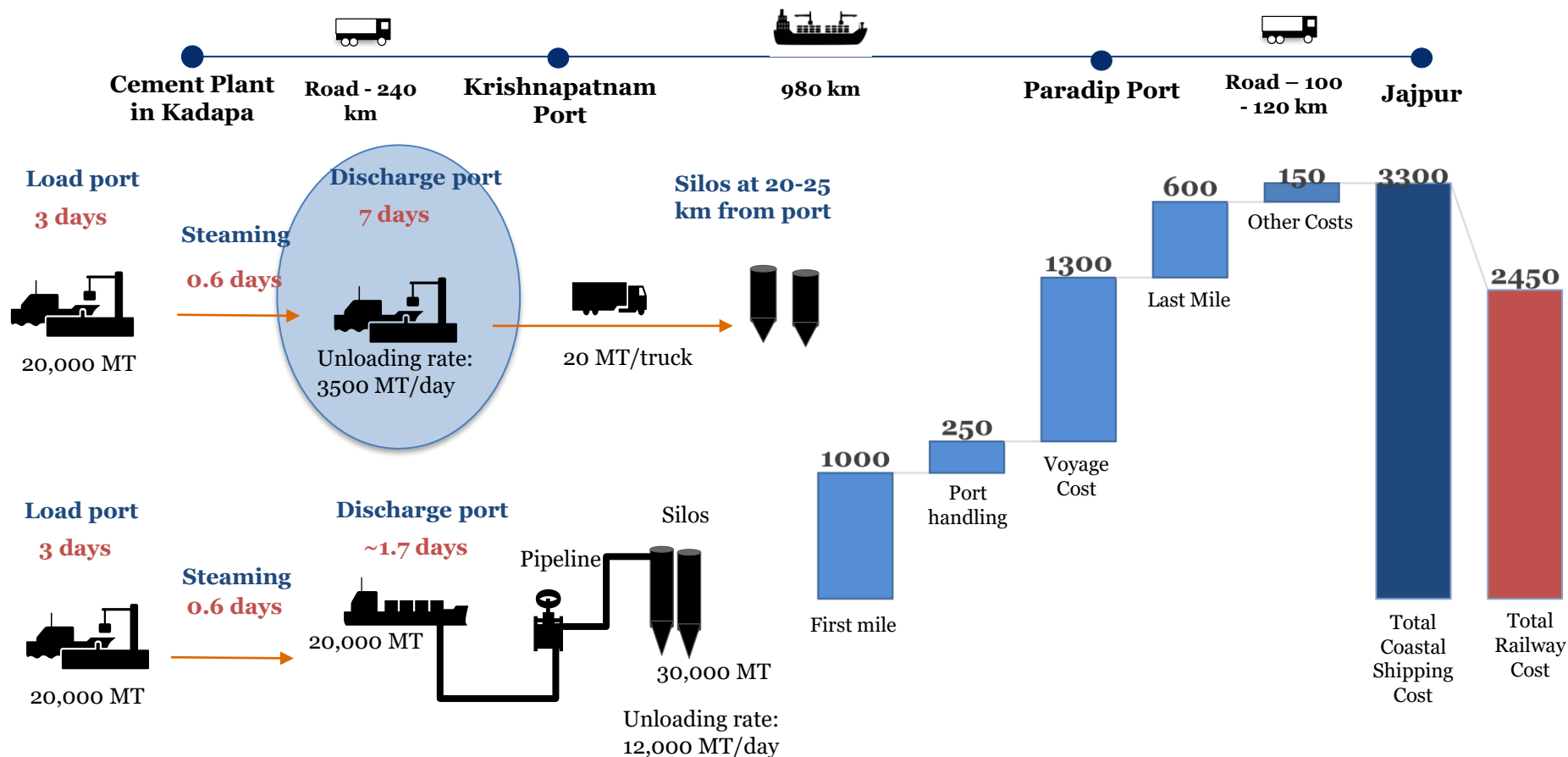
- 3 Linkage allotment to private power plants

Post interventions, coastal shipping cost to Ukai TPS can reduce to 2,150 INR / MT



Limited/insufficient handling infrastructure at ports can result in high turnaround time for vessels, critically impacting viability of commodities like cement

Logistics cost for movement of cement from Andhra Pradesh to Odisha



Post interventions, coastal shipping cost can reduce to 2,200 INR / MT

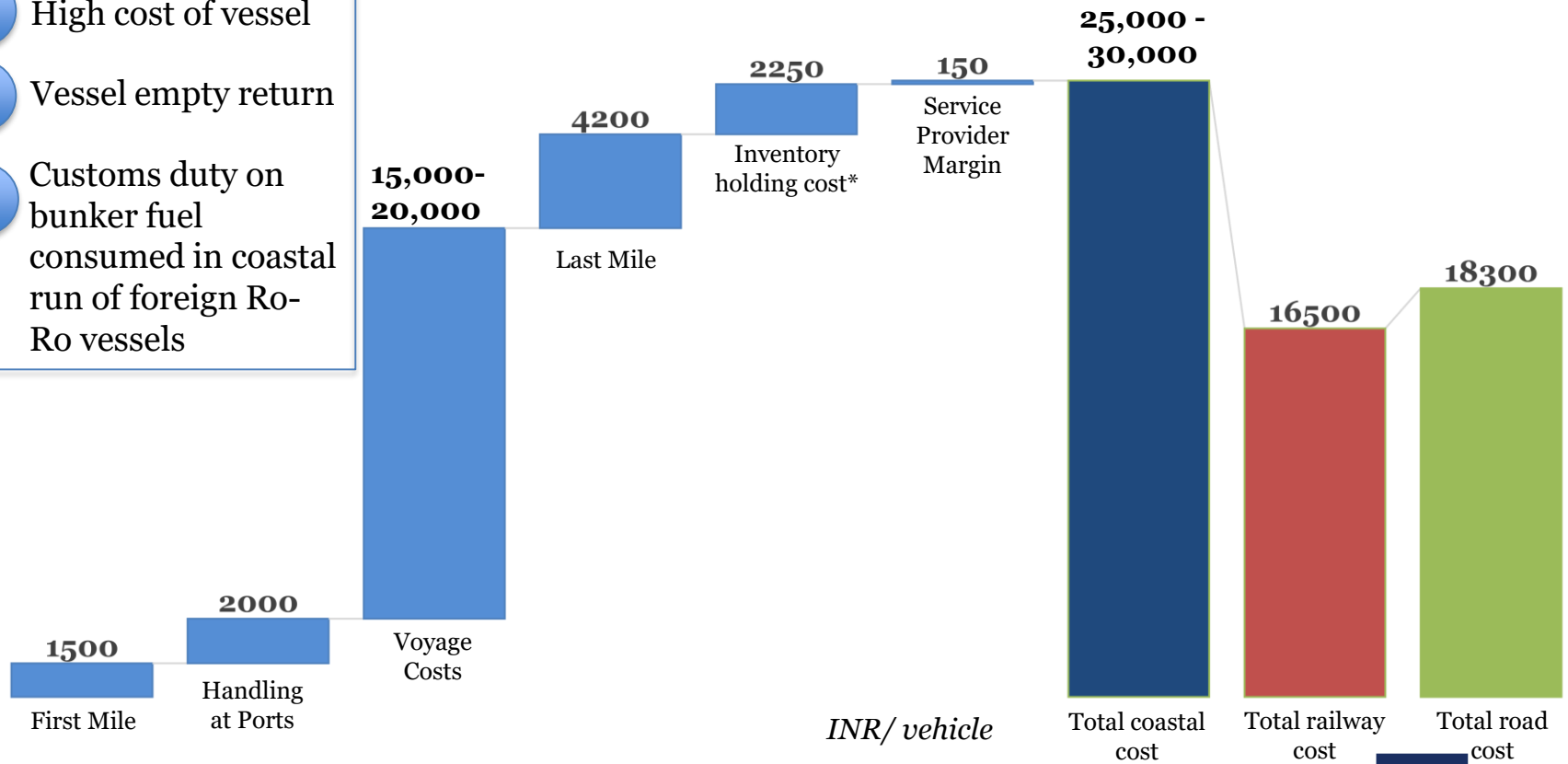
For specialized vessels, high voyage costs make it challenging to have dedicated movement with small shipments and no return cargo

Logistics cost for movement of Auto from Chennai to Ahmedabad



Key issues

- 1 High cost of vessel
- 2 Vessel empty return
- 3 Customs duty on bunker fuel consumed in coastal run of foreign Ro-Ro vessels

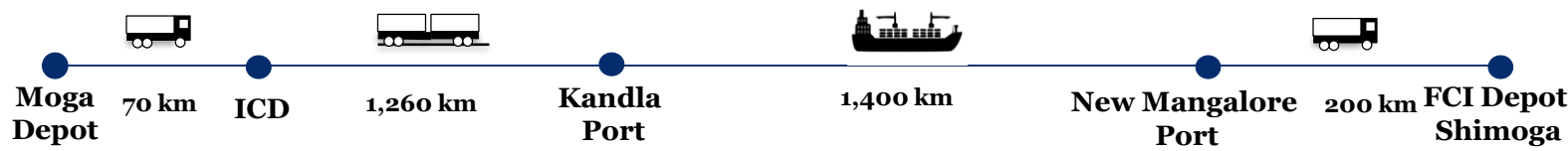


Post interventions, coastal shipping cost can reduce to 18,000 INR / vehicle



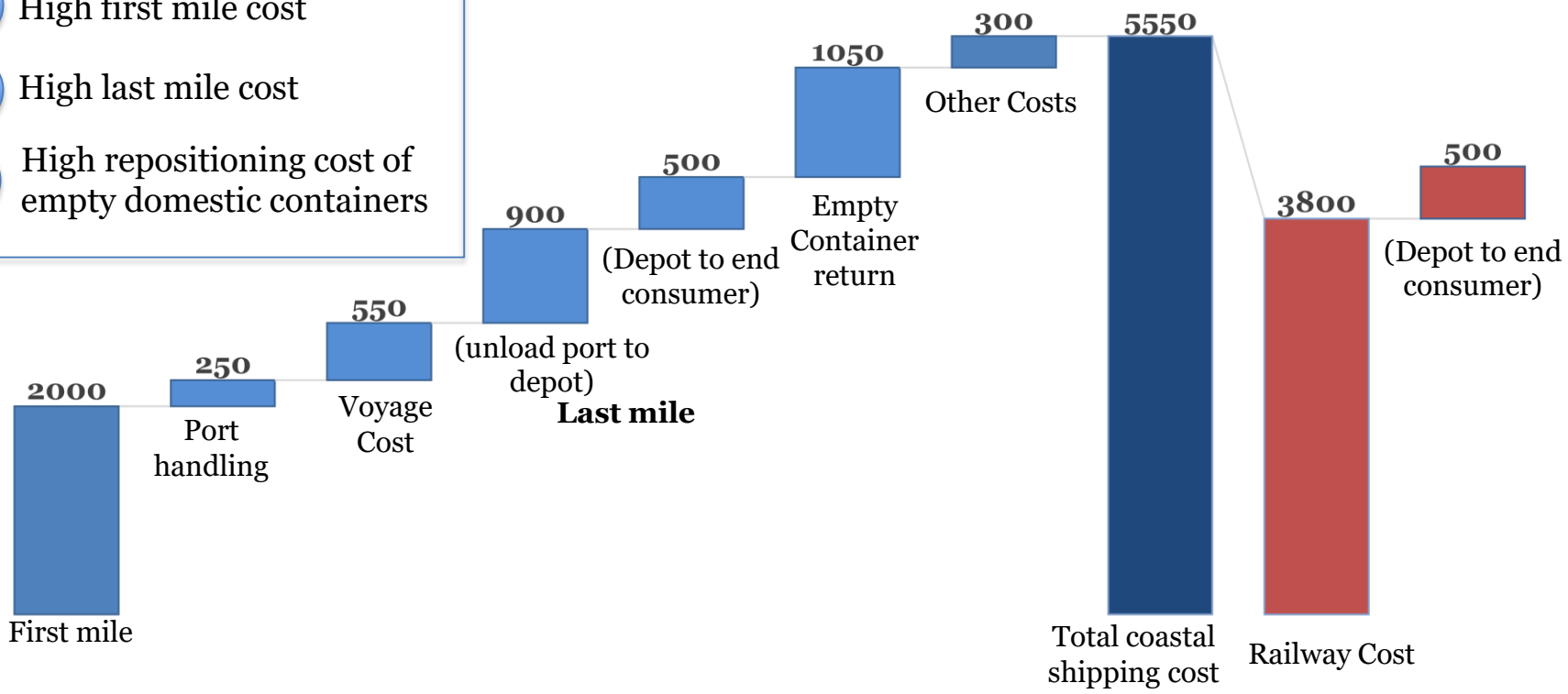
For containerized cargo like foodgrains, long lead last mile and high repositioning cost of containers make coastal movement costlier

Logistics cost for movement of Foodgrains from Punjab to Karnataka



Key issues

- 1 High first mile cost
- 2 High last mile cost
- 3 High repositioning cost of empty domestic containers



Post interventions, coastal shipping cost can reduce to 4,200 INR / MT



Basis above commodity/route wise analysis, study identified factors leading to unviability of coastal shipping for each of the target commodities (1/2)

1	High First Mile (origin to load port) Cost	Coal, Food Grain
2	High vessel costs impacting coastal shipment viability	Auto
3	Level playing field with other modes	Multiple commodities
4	High repositioning cost of empty domestic containers	Containers- Food grain, fertilizer, Cotton
5	Smaller shipment sizes of individual firms and lack of agglomeration leading to unutilized ship capacity	Fertilizer, Steel



Basis above commodity/route wise analysis, study identified factors leading to unviability of coastal shipping for each of the target commodities (2/2)

6	Empty run of coastal vessels impacting cost economics	Multiple commodities
7	Long lead for last mile (unload port to destination) transportation & distribution	Steel, Food grain
8	High turnaround time at berths	Cement
9	Infrastructure capacity issues	Coal, POL
10	Need for digitalization of process and standardization across ports	Multiple commodities



...and then formulated interventions across policy, infrastructure and process & institutional aspects to address these issues

Infrastructure

Developing port based agglomeration centres

Developing port based warehouses

Developing coastal berths & IWT terminals

Improving connectivity infrastructure of ports

Policy

Commodity specific interventions

Vessel availability for coastal trade

Level playing field with other modes

Assess and plan for IMO 2020 regulation

Process & Institutional

Promotion and monitoring cell

Common logistics platform

Automation of customs clearance process

Green channel clearance

Standardization of vessel conversion process

Prioritizing development of coastal berths at four Major ports and four greenfield locations can augment coastal potential by ~35 mn tons

1. Coastal berths development

- Prioritise the planned coastal berths at JNPT, Chennai, Cochin & Old Mangalore port
- 4 new coastal berths may be looked at: **Dholera, Machilipatnam, Palghar, Kori Creek**



Key coastal berths, which are already planned/under implementation

Coastal berths	Cargo potential (FY 25)	Status	Project Cost ¹
JNPT/Mumbai	~10 MMTPA (Cement/Steel)	Coastal berth at JNPT under implementation	INR 1.7 Bn
Chennai	~2 MMTPA (Steel)	Coastal berth at JNPT under implementation	INR 0.8 Bn
Cochin/Kollam	~8 MMTPA (Tiles/Cement)	Coastal berth planned at Kollam	INR 0.18 bn
NMPT/Old Mangalore	~3 MMTPA (Cement/Foodgrain)	Coastal berth planned at Old Mangalore	INR 0.65 bn

New coastal berths at Dholera, Machilipatnam, Palghar & Kori creek

Project Proponent	Ports/SDCL
Project readiness	Concept stage
Investment Size	~INR 5-10 billion (depends upon dredging & other location specific factors)

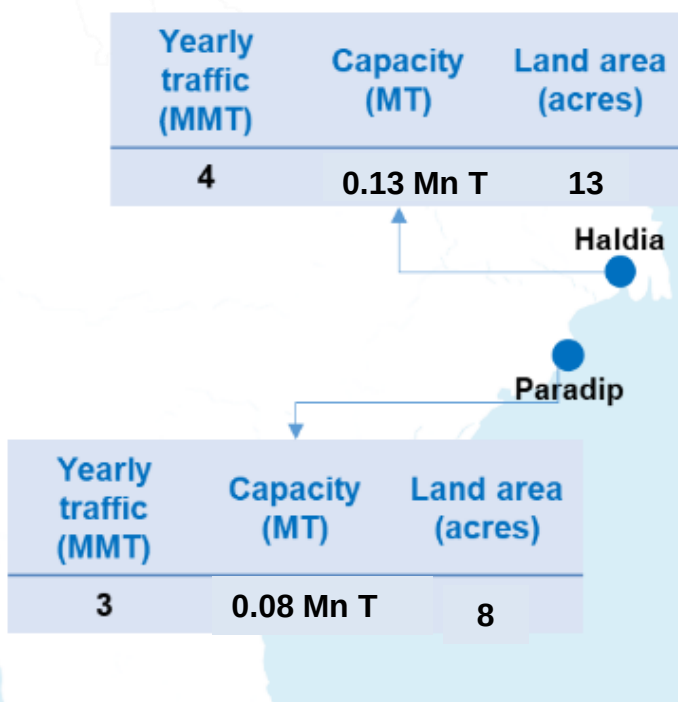
Source: ADB Study team analysis

Note: ¹<http://www.pib.nic.in/Pressreleaseshare.aspx?PRID=1523346>

Development of agglomeration centres near Paradip and Haldia port can aid coastal movement of steel from this key steel production region

2.1. Agglomeration Centres : Steel agglomeration centres near Paradip and Haldia ports

Agglomeration centres at Haldia / Paradip ports



Source: ADB Study team analysis

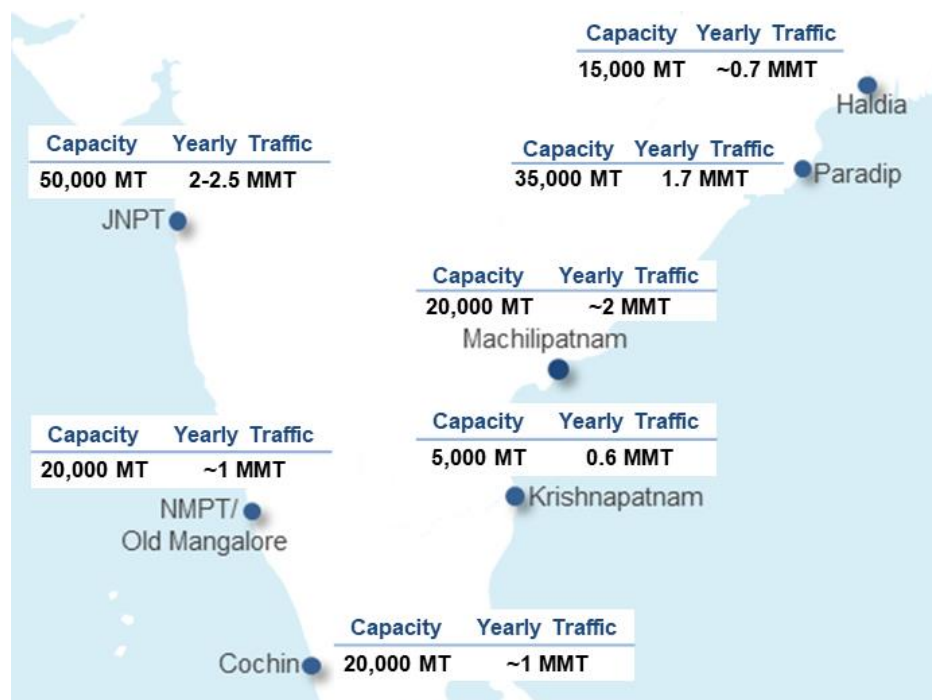
Project Proponent	3PL players/ SDCL / Steel players
Project readiness	Concept stage
Land requirement	~ 8 -13 acres land required near Paradip/Haldia ports
Investment Size	~INR 2.4 billion including all costs such as land, equipment, railway siding and warehouse construction. (High level estimate)



Port based cement silos can help reduce turn around time and increase coastal shipping viability for cement movement

2.2 Agglomeration Centres : Port based cement silos at 7 key locations

Location of port based cement silos and capacities



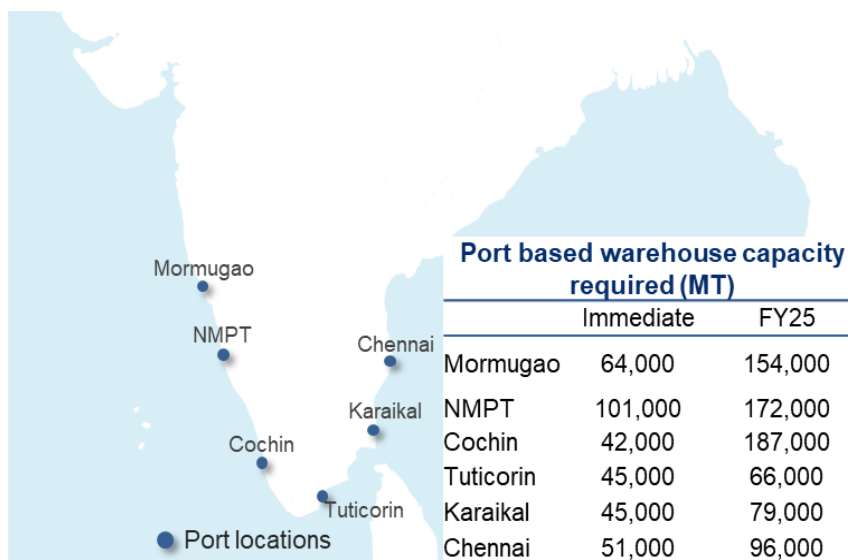
Source: ADB Study team analysis

Project Proponent	Cement players/Ports/SDCL
Project readiness	Concept stage
Land requirement	~3-5 acre land required besides the port berth at each location, depending on capacity; ~ 7.5 acre at JNPT & ~1 acre at Krishnapatnam
Investment Size	Overall ~INR 7.5 billion, including CapEx and land cost at port

Port based food-grain warehouses can reduce the logistics costs of food-grain distribution in coastal districts of south India

2.3. Agglomeration Centres : Port based food-grain warehouses at 5 locations

Location of port based warehouses



Project Proponent	FCI/SDCL/Private Players/Ports
Project readiness	Concept stage
Land requirement	~ 5 -15 acre at each port, depending on the capacity
Investment Size	~INR 4 billion for immediate capacity required at the ports

Since FCI would have ongoing contracts with existing warehouses, it is proposed that initially port based warehouse of capacity equivalent to lesser of storage shortage in districts and requirement for storage of coastal cargo could be developed near the ports.



Rail connectivity projects from Talcher to Paradip port need to be prioritised for enabling coastal movement of coal and steel

3. Key connectivity projects

a) Rail connectivity from Talcher to East Coast ports: The development of rail links connecting Talcher & Paradip port need to be prioritised; IPRCL may take up some of these projects.

S.no	Infrastructure Projects	Implementing agency	Funding Source Identified (Yes/No)	Project Cost INR Bn	Project Readiness	Priority
1	3rd and 4 th rail line from Budhapank- Salegaon via Rajatgarh	Indian Railways	Yes	11.73	Under implementation	Short term priority (for coal/steel transportation from Talcher to Paradip)
2	New rail line from Angul to Sukhinda	Indian Railways	Yes	12.03	Under implementation	
3	New rail line from Haridaspur to Paradip	Indian Railways	Yes	18.44	Under implementation	
4	Third rail line from Sukhinda Road to Jakhapura	Indian Railways	Yes	0.56	Under implementation	
5	Doubling of rail line from Bhadrak to Dhamra Port	Govt. of Odisha/Pvt	No	10	DPR prepared	Short-term
6	Bhadrak - Nergundi 3rd rail line	Indian Railways	Yes	8.43	Under implementation	Short-term
7	Talcher-Gopalpur port rail	Not decided	No	Not available	Project Conceptualization	Long-term

Rail and road connectivity to proposed coastal berths and Inland waterway need to be developed in conjunction with sea side development

3. Key connectivity projects

b) Other key connectivity projects:

- Rail connectivity to Machilipatnam port (in conjunction with coastal berth development)
- Rail connectivity to Hazira port for coastal coal movement (if linkage rationalisation to MCL is undertaken)
- Road connectivity to new coastal berths at Palghar & Dholera (in conjunction with coastal berth development)
- Developing NW-4 for transportation of cement to Kakinada/Krishnapatnam ports

S.no	Infrastructure Projects	Implementing agency	Funding Source Identified (Yes/No)	Project Cost INR Bn	Project Readiness	Priority
1	Development of dedicated Machilipatnam Port Rail Connectivity from Pedana Station	Private	Yes	0.4	DPR to be prepared	Medium-term
2	Railway infrastructure connecting Hazira Port	Not decided	No	Not available	Project Conceptualization	Long term
3	Last mile approach road for Palghar coastal berth	Not decided	No	Not available	Project Conceptualization	Long term
4	Last mile approach road for Dholera coastal berth	Not decided	No	Not available	Project Conceptualization	Long term
5	Develop NW4 (from Vijayawada to Galagali on Krishna river) Kakinada-Vijayawada - Muktyala, Vijayawada to Thada	IWAI	No	70.02	Under implementation	Long term



Specific packages for development of infrastructure projects can be considered for funding through Govt/multilateral /private players

#	Project	Estimated Capex (INR Bn)	Priority	Remarks
Package -1	Port based cement silos at 7 ports	~7.5	Short term	Port based cement silos are critical for coastal movement of cement
Package -2	Steel Agglomeration centres near Haldia and Paradeep ports	~2.4	Medium term	Important for regular coastal movement of steel by both large & small players
	Food-grain warehouses near 6 ports	~4	Medium term	FCI has already started costal movement of food-grains. Port-based warehouses would further reduce the costs for coastal movement
Package -3	Equipment for under-construction coastal berths at Old Mangalore & Kollam	Not identified (Typically ~INR 0.5 billion per berth)	Short term	Important for ensuring target discharge rates & service levels at under-construction coastal berths
	Development of 4 coastal berths at Dholera, Palghar, Machillipatnam & Kori Creek	~5-10	Long term	Dedicated coastal berths would reduce first/last mile distances for key coastal Origin-Destination routes; However, coastal movement can be initiated by providing priority to coastal vessels at existing adjacent ports
Package -4	National Waterway connectivity projects (NW-4)	~INR 70 billion	Long term	Important for sustainable coastal movement of products from Kakinada/Krishnapatnam ports respectively considering saturation of railway routes in long term



Multiple commodity specific policy initiatives have been identified, many of which have already been put up for implementation during the course of the study

Commodity specific interventions

	Policy related Interventions	Current Status/Agency responsible
Auto	Allow Mixing of EXIM and Coastal Cars on Ro-Ro vessels	Implemented (Customs)
Auto	Exemption of Customs and Central excise duty on bunker fuel consumed in coastal run of foreign Ro-Ro liners	Customs
Containers	Allow use of EXIM Containers for Carriage of Coastal Cargo	Implemented (Customs)
Coal	Rationalization of Coal Mine Linkages with Power Plants	Ministry of Coal
Food grains	Rationalization of Origin Foodgrain Depots for Coastal Movement	Implemented (Food Corporation of India)
Food grains	Sharing of Last Mile Cost Saving from Port-based Food-grain Warehouses with State	FCI / State Govt
Fertilizer	Removing need for physical transportation of fertilizer cargo to a rail siding to claim subsidy	Implemented (Dept. of Fertilizer)
Containers	Greater autonomy for ports and flexibility to private concessionaires in offering free storage period at port for coastal cargo	Ministry of Shipping/TAMP



Other aspects like ensuring level playing field with other modes also need to be institutionalized

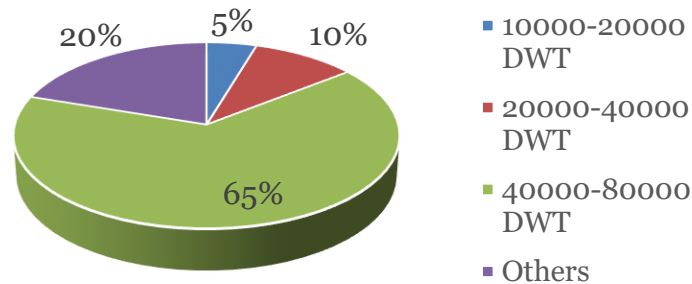
	Policy related Interventions	Current Status/Agency responsible
Level Playing Field with Other Modes	High GST Rate (12%) in multimodal transportation vs. single mode transportation	GST council
	Documentation for freight subsidy for fertilizer	Implemented (Dept. of Fertilizer)
	Move from subsidy payment for each trip to provision of consolidated freight subsidy for players to evaluate most cost effective alternative	Ministry of Fertilizer
	Designing of multimodal contracts with view coastal shipping aspects in view • No minimum cargo guarantee • No fuel price escalation clause for IFO • Fixed transit period	Dissemination through various ministries Recent contracts being drafted with active consultation with MoS and end users
IMO 2020 Regulation	Review need for policy changes to minimize cost implication of regulation	Ministry of Shipping

Type of vessels calling at ports, unviability due to dedicated run and higher costs of Indian flagged vessels all contribute to vessel availability challenge

1

Vessel type and cargo mismatch

Readily available vessel sizes on the coast – 50,000+ DWT (Supramax)



Size-wise share for bulk and break-bulk carriers calling at Kolkata, Haldia and Paradip port (Total vessels ~2160)

However, the typical parcel size of steel for coastal movement 5,000 MT to 20,000 MT.

3

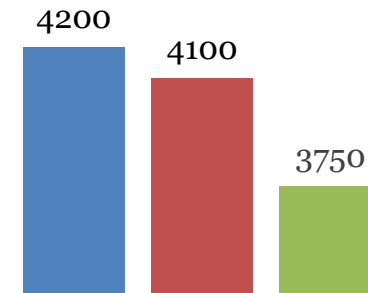
Higher costs of Indian flagged vessels

Pricing/ton charged to customer (\$/ton) to render same Equity IRR for ship owner is ~20% higher for Indian flagged vessel

2

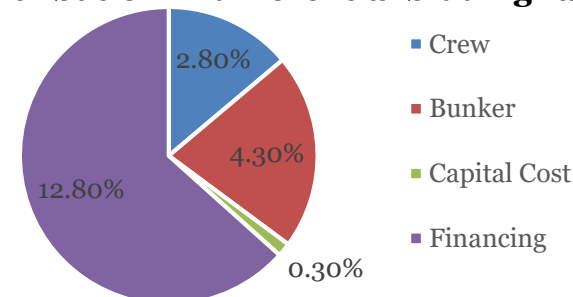
Unviability of dedicated vessel/part load movement

Cost for Jamshedpur to Thane movement via coastal shipping



- Dedicated handymax Vessel with empty return cost included
- Foreign Supramax (Part load-20000 MT) without empty return cost
- Foreign Supramax (full load-35000 MT) without empty return cost

% contribution in differential bidding rate





Vessel availability for Coastal Shipping in India can be improved by providing level playing field to Indian flagged vessels....

Option-1: Addressing high cost elements impacting Indian-flagged vessels

Issue

Loan Tenure - Typical tenure of about 6-8 yrs vs. 15 years; Challenges in restructuring

Interest rate- Interest rate on purchase of vessels in India is ~12-14% as compared to 5-6% in other countries
Financing through ECB results in similar rate (~11%) owing to hedging costs

Bunker fuel- Disparity in base price of bunker fuel available in India

Crew Cost - Disparity exists if seafarer on Indian flag spends more than 183 days while one on foreign flag spend less than 90 days

GST related- 5% IGST levied on capital cost of vessel; Offsetting on revenue earned across multiple years

Intervention

- Ensuring provisions similar to Infrastructure status applicable on Shipping industry

- Allowing coastal vessels to call at intermediate foreign ports
- With 20% USD earning ~45% loan can be taken in USD, avg interest rate reduces to ~8.8%

- Even with custom duty of 5% on foreign fuel, net cost of IFO costlier in India by ~15%
- Mechanism to ensure parity on final price needs to be established

- Income tax on seafarers for coastal voyages needs to be reassessed

- Representation to GST council as owner is unable to claim complete input credit
- Case for proposing representation on review of Place of supply rules



....or availability and access can be increased through phased relaxation of cabotage

Option 2: Cabotage Relaxation

- Relaxation under section 406 (1) and 407 (3), Merchant Shipping Act, 1958
- Relaxation to foreign flagged ships chartered by a citizen of India /company cargoes without obtaining a license from DG Shipping
- Cabotage rules have been relaxed in the past for certain specialized vessels (e.g. Ro-Ro) and certain commodities (e.g. agro-commodities)
- Issues like access to finance, longer tenure, lower rates, bunker cost can be addressed
 - however, relatively higher interest rates (owing to hedging), taxation related issues would still impact a foreign-flagged vessel operating dedicatedly in India
- Commodities specific relaxation for cargo like Steel can be considered

Institutional & process related interventions have been proposed to create a conducive business environment for coastal shipping (1/2)

Key Tasks

Institutional

1

Coastal Shipping Promotion Cell at Ministry Level

Conduct B2B meetings

Interface b/w authorities & industry

Promotion through incentives

Evaluation of projects for coastal run

Support from Marketing Unit at all the major ports

- Empanelment of Freight forwarders as Business Associates (BAs): These BAs will be incentivized on basis of volume of cargo they bring in for the port
- The Freight Forwarders will be responsible for on-ground conversion of cargo to coastal mode

2

Short sea shipping

- Institutional structure for short-sea shipping has been suggested through benchmarking with international best practices (EU)
- Development of Joint Shipping Committee for vessel related regulations, supervise the working of Promotion Centers and ease out the customs and documentation processes



Institutional & process related interventions have been proposed to create a conducive business environment for coastal shipping (2/2)

Process and Technological Improvement

Common Logistics Platform

- Development of a **coastal logistics data bank** which would contain real time information as well as historical information
- Integration of the platform with the integrated logistics portal planned by Logistics division (MoC)

Automation of Clearance Process

- Manual process of “Bill of Coastal Goods” generation to be automated
- No need for physical endorsement of BoCG by Customs
- Integration of **E-way bill system & BoCG**
- Introduction of RMS intelligence based inspection

Green Channel Clearance

- Major ports need to **earmark exclusive coastal berths, storage areas and gates** for coastal cargo outside the custom bonded area of the ports
- In order to encourage coastal shipping, it is imperative that the green channel clearance and priority berthing facilities to be provided at all major ports

Standardization of Vessel Conversion Process

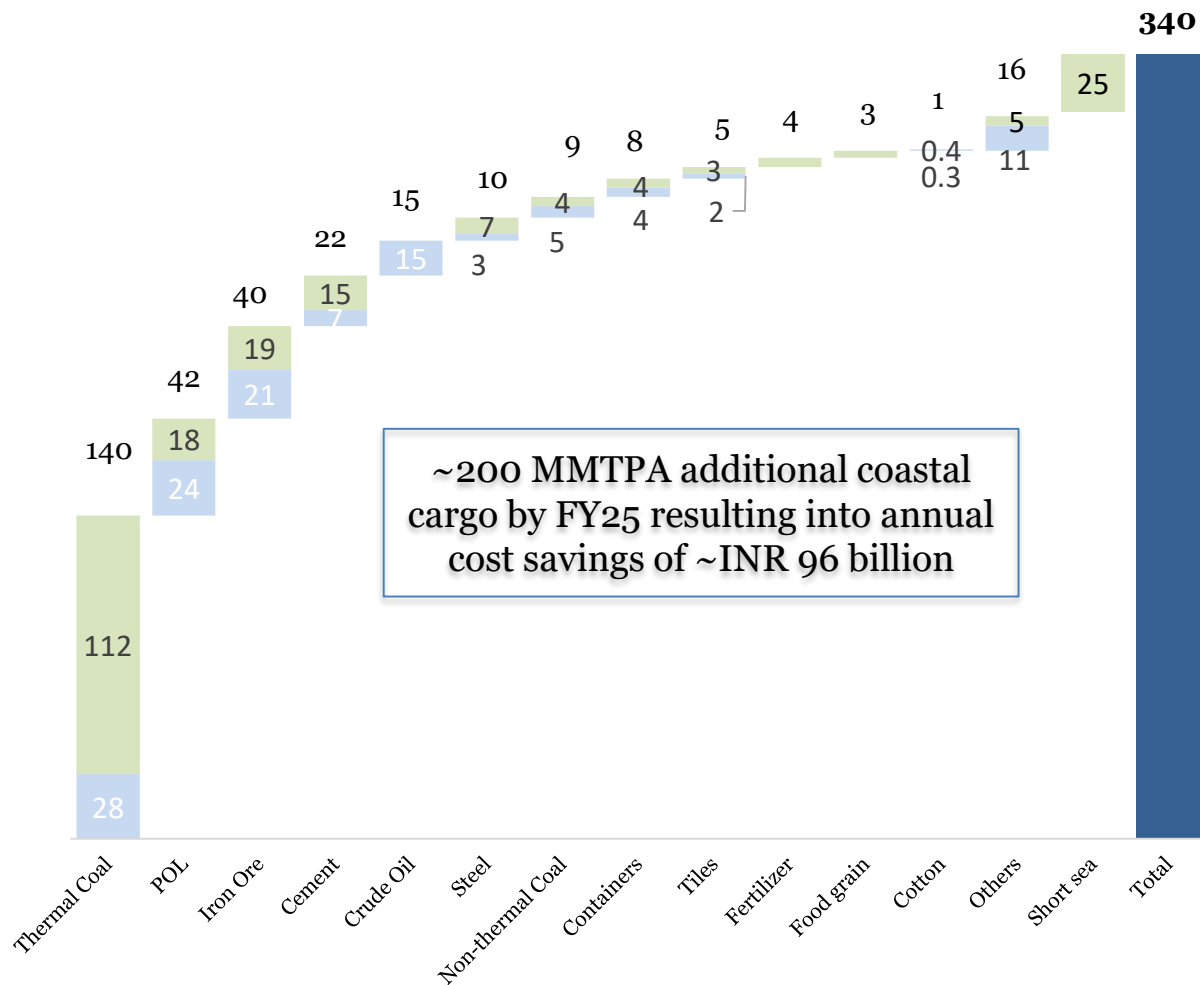
- Requirement of Importation/Exportation of Vessels for Vessel Conversion
- Time Taken for Assessment of Final Bill of Entry (B/E) During Reversion from Coastal to Foreign Run
- **SOPs for Conversion and Reversion of Vessels**



Adoption of these initiatives can increase coastal shipping potential to ~340 mn tons by FY 25, with an annual cost saving of ~ INR 96 billion

Coastal Shipping Volume in FY 25 (Total ~ 340 MMTPA)

■ Base year ■ Additional traffic till FY 25



Annual Potential Cost Saving (FY 25)

Commodity	Cost Saving* (INR/MT)	Cost Saving (INR Billion)
Thermal Coal	500	56.0
POL	1000	18.0
Iron Ore	300	5.7
Cement	350	5.3
Steel	450	3.2
Non-thermal Coal	300	1.2
Containers	215	0.7
Tiles	1350	4.1
Fertilizer	200	0.7
Food grain	100	0.3
Cotton	250	0.1
Others	200	0.8
Total		96.0

* Average cost savings based on O-Ds analysed in this study



Action-plan

Immediate action (1-6 months)

- 1 Institutionalisation of Coastal Shipping Promotion Cell**
 - Institutionalise Promotion cell under MoS
 - Appointment of Marketing officers/Business Associates at Ports
 - Continuous market outreach
- 2 Representations to authorities for policy changes**
 - Preparation of policy notes
 - Co-ordination with Customs, GST Council, DG Shipping, Department of Fertilizer etc
- 3 Initiate Pilot movements of shortlisted commodities**
 - Co-ordinate with identified PSU players & shipping lines for pilot movements
 - Issue analysis and addressal

Short-term action (6-12 months)

- 4 Project preparation for Priority Infrastructure Projects**
 - **Cement Silos:** Co-ordinate with cement players, ports and developers for affirmation on business plan; Preparation of DPR
 - **Coastal Berths:** Equipment planning for under-construction coastal berths at Old Mangalore, JNPT, Chennai & Kollam; Co-ordinate with developers/end-users for project development
 - **Steel Agglomeration Centres:** Co-ordination with steel players, Ministry of Steel and developers for affirmation on business plan; Preparation of DPR
- 5 Process changes for easing of Coastal cargo clearance**
 - Co-ordination with Customs for automation of coastal cargo clearance process and standardisation of vessel conversion process
 - Co-ordination with major ports for green channels
- 6 Development of coastal shipping data bank**
 - Co-ordinate with IPA and logistics division for setting up of logistics databank
 - Explore future integration with LPPT* and E-freight marketplace

*LPPT: Logistics Planning and Performance Monitoring Tool



Action-plan

Medium term action (12-24 months)

- 7** **DPR preparation for new coastal berths**
 - New coastal berths at Kori Creek, Palghar, Dholera & Machhlipatnam
 - Project structuring and development options through stakeholder interactions
 - 8** **Co-ordination for development of port-based food-grain warehouses**
 - Co-ordination with FCI, developers, ports & state Governments for port-based warehouses
 - Co-ordination with FCI & State Government for cost-saving sharing mechanism
 - 9** **Co-ordinate for development of connectivity projects**
 - Co-ordinate with IWAI for expedited development of NW-4
 - Co-ordinate with Railways for expedited development of identified Railway projects
 - 10** **Institutionalize Maritime Development Fund**
 - Conceptualization of fund detailing the corpus and applicable activities
-



Thank you

Lets discuss