



### Can marine highways galvanize Indian Ports?

With the signing of the trade & transit agreements with Bangladesh, announcement of subsidies incentivising modal shift of cargo, progress around relaxation of cabotage and permitting the public sector to procure their own shipping freight, **coastal shipping** has been in the news for the last months.

Marine highways or short-sea shipping- as per Wikipedia-refer to the historical terms **coastal trade**, **coastal shipping** etc, which encompass the movement of cargo and passengers mainly by sea along a coast, without crossing an ocean.

Based on experience from the supply chain as well as logistics domains, we tested some of our assessment and projections relating to this sector, during our conversations with industry participants and with an advisory . .

#### Why are marine highways important?

- Highways play a strategic role in the development of an economy. India's 7500 km coastline has an immediate hinterland of 38,000 sqkm, includes 40 districts of 5 states in the west coast, 4 states in the east coast plus the union territory of Pondicherry. Lakshadweep, Andaman and Nicobar islands with an area of about 8300 sq km, are largely dependent on coastal shipping for cargo and passengers.
- Marine highway traffic operates in the **zone between** the 'internal waters' (base lined as the point, where the waters recede during the lowest tide) to the zone with 'smooth/partial smooth waters', where the waves are of a height up to 2 meters. This is within the territorial waters of India ie within 12 nautical miles from the baseline. To make the marine highway system work, service providers need to work towards a seamless flow of cargo between road & sea, rail & sea and inter-operate with inland waterways and international feeder operations.
- Most developed nations have efficient maritime transportation systems, that supplement the cargo and passenger flows through the road and rail network, is more energy efficient and more environment friendly. Some studies indicate that about 20% of the cargo in China and 24 % of the cargo in Brazil moves through **coastal shipping**, as against 6% in India. Bangladesh moves about 32% and Germany 20% of its cargo through **inland waterways**, compared to less than 1% in India. Whereas the operating cost per ton kilometre is estimated as rupees 1.51 and 1.18 for road and rail respectively, it is 0.75 for coastal

movement. Further, whereas one litre of fuel can move one ton of cargo for 24 and 85 kilometres on road and rail respectively, the corresponding distance covered through marine highways would be 105 kilometres, making it significantly **more energy and resource efficient** and resulting in lower emissions.

- There are around 125 vessels deployed on India's marine highways presently, which include 15 container ships and some passenger vessels. In comparison, there are over 12,000 vessels deployed in this sector in China- hence there **is headroom for growth**. The imminent growth of the coastal shipping industry would drive demand for ship building, ship repairs and their ancillary industries, generating employment and driving further consumption.

### **Why hasn't it taken off and what is driving growth now?**

Marine highways have a meagre 6% modal share in India, compared to 57% by road and 36 % by rail because of challenges that include:

- Infrastructure related challenges include shortage of handling facilities for coastal vessels at ports, high port charges, draft at smaller ports, and connectivity among ports and inland rail/road connectivity with the hinterland.
- Regulation & taxation related issues include cabotage, tonnage tax, high import duties of bunker, personal income tax for the crew, customs issues.
- The above impacts consistency of service ie frequency of sailings. Further, lack of formal coordination among sectors ( rail-marine-road-air) and administrative requirements, create challenges in providing 'door-to-door' multi-modal service

The drivers for the rapid growth of marine highways include:

- Development of **new ports**, which to be successful would **need to connect** with respective hub ports for export/import and with other ports (spokes) for domestic cargo movement.
- The Sagarmala project, that envisages the **integrated** development of ports, hinterland and inter-connectivity
- Conclusion of economic agreements with Bangladesh and Myanmar would help demand side and supply side economics
- The above along with the outcome of the "Make in India" campaign would **generate cargo** for exports and domestic movement. Further, the need to move bulky over-dimensional (ODC) cargo for the windmills, power plants and oil exploration projects to support the growing infrastructure needs, would drive demand.
- Increasing congestion in the road & rail network and environmental awareness would lead to increase in demand for a less polluted mode of transportation.
- Recently announced government subsidies to shippers under the scheme for incentivising modal shift of cargo ( **SIMSC**) for cargo, containers and vehicles would help.

### **Where is the demand for coastal shipping?**

- The present coastal cargo profile comprises largely of petrol, oil lubricants ( POL), iron ore, pallets etc besides coal and fertilisers. These are mainly nominated for the Govt/PSU and captive private sector use.
- There is a significant potential for new cargo by enticing modal shift away from road/rail to marine highways. For cargo originating closer to the west coast, these could include industrial and finished products like steel, tiles, cars cement and also marble, fertilisers and food grains.

- For the east coast these could include bulk and minerals like silica, bauxite, manganese and limestone besides cars and engineering good from the south.
- For containerised cargo, the estimated market size for coastal shipping along with international feeder operations is estimated to be around USD 500 Million in value and about 1.3 M TEUs in volume annually and is expected to grow at over 20% per annum.

#### **How do customers buy ie how do shippers procure freight?**

- Shippers usually take a supply chain perspective. For example a factory-to-store view of the transit could include inland transportation from the factory to the port, handling at the port, sea transportation, interim storage & handling at the intermediary/destination port and inland transportation to the warehouse/store as required. Shippers usually tender their full/part requirements of the transportation legs, periodically. Unitisation and containerisation of the cargo could provide more choices and flexibility.
- Shipping lines and freight forwarders, who work as aggregators, compete to move this cargo, quoting against such tenders. The assessment criteria of shippers usually includes the supply chain cost, transit time, frequency of services, reliability expected based on organisational capability, integrated offering and geographical coverage based on alliances.
- Shippers requiring movement of large volume consignments from remote locations, if under-served by logistics service providers, would usually invest in captive transportation and **port assets including captive jetties**, to ensure smooth movement of bulk cargo from mines, plants etc

#### **How do service providers compete, what are the good practices?**

- Market entry demonstrating a commitment- investing in assets. Depending on the choice of routes to compete, it could be 3-5 Indian flag vessels on long lease/hire purchase, own domestic and export containers. Targeting the new customer segments mentioned above with an integrated offering of road, rail and marine highway movement from origin to destination.
- Organisation and systems design, enabling one view of the customer by the sales, trade, customer services, operations and billing teams. Having a dedicated team for demand analysis, solution design and intermodal collaboration.
- Solutions design covering the assessment criteria mentioned above

#### **What are the revenue and cost structures?**

The revenue for the integrated movement usually includes billing for:

- the sea voyage
- terminal handling charges at the port,
- handling charges
- detention charges for the containers, vessel, as applicable
- miscellaneous and coordination charges, as may be levied

The cost build up for the coastal leg usually includes:

- Handling charges ~ 35%
- Charter hire ~ 25%
- Port dues ~ 15%

- Bunker fuel ~20%
- Balance being the profits after catering to the marketing and admin/staff expenses.
- The road and rail charges, if billed together are usually a pass through.

#### **What are the regulations and incentives?**

- The Committee on Standards for Coastal and Inland Vessels, Sea Limits and Incentives , chaired by the Chairman of the national shipping board (NSB), submitted its report in Jan/2014 bringing several stakeholders together and providing necessary clarifications.
- Ship building norms for coastal and inland vessels with harmonised standards for river sea vessels ( RSV) were issued by DG Shipping in Jul/2013, who have also permitted dual registration of coastal vessels by the Indian states seeking to develop coastal shipping.
- The other relevant acts include- Coastal Vessels Act 1838; Indian Vessels Act 1917; Merchant Shipping Act 1858 ( includes the cabotage law); Inland Waterways Act 1985 amended 2001; Multimodal Transportation of Goods Act 1993 ; Inland Waterways Policy 2001 and Cruise Shipping Policy 2008.

The incentives declared by the Govt recently under SIMSC mentioned above, include payment to the shipper for transportation of new cargo ie fertilizers, food grains, steel, marble, tiles , a subsidy @:

- 1 Rupee per ton per nautical mile(nm) up to 1500 nm for each trip
- 3000 Rupees per twenty feet container (TEU) in terminal handling charges
- 300 Rupees/2-wheelers , 600 Rupees/3-wheelers and 3000 Rupees for other vehicles

#### **What trends do we see emerging?**

- Marine highways would continue to grow as a geo-economically important component of the economy and a key component of the logistics value chain in India, notwithstanding significant execution challenges.
- Given the attention & support that it is receiving from the Govt and the interest generated in the industry, expect more Indian players to enter this sector, which has space for several mid- size operators that will further develop the market.
- While not all ports would become hub-ports, each port would need to connect with the domestic and international trade lanes through respective hub-ports. Marine highways would provide the opportunity to connect to the trade lane network.
- Some port operators would leverage the opportunity to provide differentiated services to coastal vessels and yet some port developers would build dedicated berths and land side assets to facilitate trade through marine highways and inland waterways.
- As service providers leveraging marine highways, seamlessly integrate their services with feeder for International operations and inland waterways for the domestic operations, marine highways would become the lifeline for emerging ports and a differentiator for hub-ports .



Please feel free to share your feedback, comments with us at [Director@maritime-world.com](mailto:Director@maritime-world.com)