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INDIAN SHIPPING INDUSTRY TRANSFORMING TO SURGE AHEAD

The Indian shipping sector plays an important role in India's economy. Almost 90 per cent of the country's trade by volume is conducted via sea.



Shipping is the lynchpin of global economy and international trade. It is one of the most globalised industries operating in a highly competitive business environment. It is the safest and most environmentally benign form of commercial transport. Around 90 per cent of world trade is carried by the international shipping industry. Without shipping the import and export of goods on the scale necessary for the modern world would not be possible.

Currently, there are over 50,000 merchant ships trading internation-

ally, manned by more than one million seafarers. The basic types of ships include container ships, bulk carriers, tankers, ferries, cruise ships and specialised ships. The total world shipping tonnage is registered in more than 150 nations with Panama leading followed by Liberia, Bahamas, Marshal Island and Singapore.

India has a long coastline of about 7517 km spread on the western and eastern shelves of the mainland and also along the Islands. It has twelve major ports, six each on the west and east coasts and about 200 minor ports. It has a total of 963 ships (657 coastal and 306 overseas). It has

the largest merchant shipping fleet among the developing countries and is ranked seventeenth in the world. Indian shipping tonnage today stands at 9.47 million GT which was only 192,000 GT on the eve of independence.

Challenges and opportunities for India's shipping industry

The Indian shipping sector plays an important role in the country's economy. Almost 90 per cent of the country's trade by volume is conducted via sea and the country boasts of having the largest merchant shipping fleet among the developing nations. The Indian shipping industry not only transports national and international cargoes, but also provides various other facilities such as ship building, ship repairing, lighthouse facilities, and freight forwarding. It is undergoing a major transition from its traditional form in order to grab lucrative business opportunities.

With globalisation and liberalisation, the Indian shipping industry is all set to acquire new dimensions in terms of demand and infrastructural development. In order to resist stiff competition posed by foreign companies, the Indian shipping companies are striving to bring about rapid transformation. The way cargo traffic was handled has changed over the years. Earlier, it was under a

protected environment where a tonnage committee decided as to what type and size of ships the companies should opt for. Cargo was assured for those vessels which were acquired through government subsidy.

Crude petroleum products constitute a major chunk of India's sea-borne cargo. Deregulation in the oil sector has been welcome news for the shipping companies as crude oil carriers do not have to deal with fixed freight rates irrespective of the market condition. However, there is another problem which has to be dealt with. Imports have decreased over the year because of higher production by the domestic refineries, which has reduced transportation. The government plans to introduce pipeline networks which will seriously affect coastal transportation.

New avenues to be explored by the shipping industry

There are opportunities that need to be grabbed by the shipping companies. Liquefied natural gas (LNG) is to be imported to harness India's power and fertiliser projects. This plan involves huge volume of business for the shipping industry amounting to several billion dollars. However, this process is expensive because it costs \$200 million for one ship to carry LNG. Therefore it is important for the Indian shipping companies to build strategic tie-ups with their foreign counterparts so that they do not miss out this business opportunity.

The state-owned Shipping Corporation of India (SCI) has joined hands with Mitusi Osaka Shosen Kaisha (OSK), a consortium in Japan, to build LNG vessel to serve India's needs. Even the private companies have shown interest in LNG transportation. Although the Indian shipping companies are interested in LNG transportation, lack

Table I
Indian Shipping Tonnage Over the Years

Year	Coastal		Overseas		Total	
	Ships	GT	Ships	GT	Ships	GT
1951	71	205,699	23	166,679	94	372,378
1961	97	313,694	75	544,139	172	859,883
1971	66	230,822	184	2,213,749	250	2,444,571
1981	59	249,633	331	5,494,887	390	5,740,520
1991	163	523,733	255	5,515,587	418	6,039,320
2001	316	697,242	230	6,191,357	546	6,816,599
2009	658	975,507	308	8,412,226	966	9,387,733

of adequate experience and the huge amount of money required for LNG carriers act as major hindrances.

In India, if all power plants under implementation come up in the next four or five years, then there will be huge growth in the shipping requirement. It will also become one of the driving factors, along with China. China is building up the whole nation, so the requirement from there will anyway continue for the next 15-20 years.

The infrastructure in India is improving, power plants are coming up. All these need some kind of import, like power plants will need coal. The demand here may not be like China. It may be slow but it will definitely come up.

National Maritime Development Programme

On the heels of the Golden Quadrilateral and the North-South and East-West projects that are expected to vastly improve connectivity in India, comes the Rs 610-billion National Maritime Development Programme (NMDP) to boost infrastructure at major ports in the next ten years.

Under the NMDE, 228 projects have been identified for implementation in two phases through public-private partnership. By identifying specific projects and other measures, the NMDP will hopefully over the

next 10 years give a concrete shape to the vision and strategy of the National Maritime Policy.

Under the NMDP, public investments will be primarily for common user infrastructure in the ports such as deepening and maintenance of port channels, construction of breakwaters, internal circulation systems of cargo within ports, and rail and road connectivity from ports to the hinterland. Private investments will be in areas where operations are primarily commercial such as construction, management and operation of berths/terminals.

According to the Ministry, the traffic is likely to grow at all ports at a compounded annual growth rate of 7.69 per cent; the CAGR for traffic at major ports was 7.43 per cent and non-major ports 8.47 per cent. The highest CAGR has been in container traffic, at 18.31 per cent.

To meet the projected traffic of 705.84 million tonnes (mt) to be handled by 2013-14 at major ports, a capacity of 917.59 mt has been estimated. According to the Ministry note, this means in the next ten years additional capacities of 528.09 mt would have to be created; the current port capacity is 389.5 mt.

The major ports were asked to identify projects that would meet the demands of a growing international traffic and to bring their facilities on a par with world standards. Most

Table II

Distribution of Indian Tonnage as on October 31, 2009

Name of the company	Ships	GT	Per cent of total GT in the country
Shipping Corporation of India Limited	80	4,076,000	32.67
Great Eastern Shipping Co.	65	1,626,041	17.27
Varun Shipping Co.	16	406,920	4.32
Mercator Line Ltd	16	690,396	7.33
Eassar Shipping and Logistics Ltd	29	443,725	4.71
Surendra Overseas	5	168,314	1.78
Tolani Shipping Co.	6	209,460	2.22
Five Star Bulk Carriers	3	59,327	0.63
West Asia Maritime	4	107,672	1.14
Chowgule Steamship	5	53,882	0.57
Shambal Fertilisers and Chemicals	4	227,714	2.41
Sanmar Shipping Ltd	4	104,722	1.11
Redian Shipping	4	905,551	0.96
Others	722	2,148,440	22.82
Total	963	9,413,164	100

ports categorised their projects with the fund requirements and the financing pattern under the five broad heads of development process as:

1. Projects related to port development (construction of jetties, berths, so on),
2. Procurement, replacement or upgradation of port equipment,
3. Deepening of channels to improve draft,
4. Projects related to port connectivity and other related schemes.

The investment envisaged for these projects is estimated at Rs 610 billion. Of this, Rs 392.38 billion has to come from the private sector, Rs 114.45 billion through budgetary support and Rs 50.78 billion from port trusts' internal resources.

This investment includes the requirement of funds on the rail and road connectivity for which Rs 45.75 billion has been earmarked (Rs 18.98 billion through the Railways; Rs 10.72 billion through joint ventures with ports, the National Highways Authority of India or the state government concerned, and Rs

16.40 billion through joint ventures formation with ports, the NHAI or state governments.)

Present scenario

About 95 per cent of volume and 70 per cent by value of India's international trade is carried through maritime transport. India has 12 major ports, six each on the west and east coasts and about 200 minor ports.

At present, India has a total of 963 ships (657 coastal and 306 overseas) with 9.4 million gross tonnage (GT) and 15.5 million DWT (deadweight).

There has been sustained rise in volume of exports with revival of growth in the manufacturing sector and improved export competitiveness. Government has fixed an ambitious target of \$200 billion for export by the year 2010-11.

Indian shipping consists of 31 major companies (INSA members) with Shipping Corporation of India (SCI), the central PSE being the largest one. The country has

the largest merchant shipping fleet among the developing countries and is ranked 17th in the world. Regulation of merchant shipping is governed by Merchant Shipping Act, 1958. Apart from facilitating transportation of national and international cargoes, Indian maritime sector also provides a variety of other services such as cargo handling, ship building and ship repairing, freight forwarding, light house facilities and training of marine personnel. India also has three national waterways, viz, Ganga, Brahmaputra and West coast canal.

Maritime training

The Baltic and International Maritime Council/International Shipping Federation (BIMCO/ISF) manpower update estimates the worldwide supply of 1,227,000 seafarers, comprising 404,000 officers and 823,000 rating, with a comparatively small number of countries providing the vast majority of seafarers. Out of total population of seafarers, compared to Far East countries providing about 37 per cent of the workforce, the share of Indian seafaring workforce stands at meagre 6 per cent. In term of number, there are 22,000 officers, and 53,000 ratings working on Indian and foreign flags. According to the same manpower update series, shortage of world shipboard officers is predicted to be escalating to 46,000 in 2010, due to phasing out of OECD (Organization for Economic Co-operation and Development) officers, expansion of world shipping, etc. It is worthwhile mentioning here that merchant navy is not a popular vocation with the youth in OECD countries. The worldwide rating update also indicates continual demand for skilled, young and competent hands.

Global shortage of officers thus offers a golden opportunity to India, not only in terms of employment

opportunities worldwide but also in terms of foreign exchange earnings.

Great importance has always been attached to the maintenance of high-quality training imparted to personnel in India, which has facilitated India emerging as a major manpower supply nation to the world shipping.

The birth of Indian Maritime University (IMU) is a long cherished dream of the maritime community of India. The IMU has been established as a Central University by the government of India under an Act of Parliament, namely, the Indian Maritime University Act 2008.

The Act was brought into force on 14th November 2008 and notified in the Gazette of India. The university will integrate into its fold the existing seven maritime academic institutions, namely, National Maritime Academy-Chennai, TS Chanakya Mumbai, Lal Bahadur Shastri College of Advanced Maritime Studies & Research-Mumbai, Marine Engineering Research Institute-Mumbai, Marine Engineering Research Institute-Kolkata, Indian Institute of Port Management-Kolkata and National Ship Design & Research Centre-Visakhapatnam.

Coastal shipping

India's freight transport system carries approximately 1000 billion tonne kilometres; the modal share being road 60-65 per cent, rail 30-32 per cent and coastal shipping 6-7 per cent. The modal share of coastal shipping in European Union is more than 40 per cent. With Indian economy growing at 6-7 per cent, the freight transport demand is likely to grow to 2000 billion tonne-km in next 8-10 years. As such, there is a need for integrated transport planning accompanied by modal shifts in favour of cost-efficient mode such as coastal shipping. The need for modal shift arises mainly from the

Table III
Summary of Coastal Vessels as on 31-10-2009

Sr. No.	Type of vessel	No. of vessel	G.T.	D.W.T.
1	Dry cargo liner	72	121,821	179,301
2	Tug	212	61,392	20,658
3	Dry cargo bulk carriers	12	237,220	364,928
4	Tankers (product carriers)	14	54,995	66,723
5	Tankers (crude oil carriers)	2	50,080	82,246
6	Passenger-cum-cargo	30	82,912	27,232
7	Passenger services	50	16,423	1,925
8	Ethylene gas carriers	3	8,727	6,558
9	Ro-ro	1	956	1,386
10	Dredgers	25	113,761	72,652
11	Offshore supply vessels	106	110,737	129,876
12	Specialised vessels for offshore services	37	87,492	50,183
13	Port trusts and maritime boards	93	45,199	15,702
	Total (vessels) coastal trade	657	991,715	1,019,370

environmental concerns and the need to alleviate congestion, not to mention the economic return. Lack of integrated approach will only add to chaos on the road and rail, besides further distorting the modal mix.

It would, therefore, be in the interest of the country to develop coastal shipping. Our goal should be to reduce the stress on road and rail and also on environment by diverting at least 5 per cent cargo moved by rail and road as on today in the next 10 years.

Ship-building and ship repair

Ship building sector contributes significantly to Japanese, Korean and Chinese GDP. The situation with respect to skilled and semi-skilled manpower, technical capabilities, ancillary industry base and investment funding is ripe now in India for ship-building sector. Therefore the government should make investments in this sector through NMDP which would be catalytic to its growth. Under the NMDP programme, revival

of HSL and HDPEL, modernisation and enhancing capacity of the public-sector shipyards, setting up of two international shipyards and strengthening of NSDRC to enhance its design and research capabilities have been envisaged. The investment of Rs 71.95 billion have been earmarked for these projects, out of which Rs 32.35 billion would be met through budgetary support from the Government, Rs 9.6 billion from the internal resource of the PSEs and Rs 30 billion will come from private sector and other sources. The nodal responsibility of the entire ship-building and ship repair industry vests with the Department of Shipping, Ministry of Shipping, Road Transport and Highways.

Shipyards under Ministry of Shipping

1. Cochin Shipyard Limited, Cochin
2. Hindustan Shipyard Limited, Visakhapatnam (under process of transfer from Ministry of Shipping to Ministry of Defence)

Table IV

Summary of Overseas Vessels as on 31-10-2009

Sr. No.	Type of vessel	No. of vessel	G.T.	D.W.T.
1	Dry cargo liner	16	172,249	213,185
2	Cellular container	15	179,629	2,269,043
3	Dry cargo bulk carrier	88	2,464,103	4,308,344
4	Ore oil bulk carrier	2	94,955	169,257
5	Oil tanker (crude carrier)	57	3,109,070	5,645,191
6	Oil tanker (pc)	51	1,888,770	3,349,054
7	Passenger-cum-cargo vessel	3	11,257	9,663
8	Acid carrier	4	74,817	116,639
9	Timber carrier	0	0	0
10	LPG carrier	11	272,404	337,547
11	Supply vessel	41	93,557	93,321
12	Ro-ro container vessel	2	17,790	18,889
13	Dredger	6	28,933	12,641
14	Tug	10	13,915	12,715
Total (vessels) overseas trade		306	8,421,449	14,513,350
Total coastal vessels		657	991,715	1,019,370
Grand total coastal and overseas vessels		963	9,413,164	15,532,720

3. Hooghly Dock and Port Engineers Limited, Kolkata

Shipyards under Ministry of Defence

1. Mazagon Dock Limited, Mumbai
2. Garden Reach Shipbuilders and Engineers Limited, Kolkata
3. Goa Shipyard Limited, Goa

Shipyards under the control of state governments

1. Alcock Ashdowan Co. Ltd, Gujarat
2. Shalimar Works Limited, Kolkata, West Bengal

The geographical profile of shipbuilding industry evinces location change. Shipbuilding industries have shifted from Europe to Japan, Korea and Singapore in 70s and to China in 90s. Due to cost-effective labour force and availability of

ancillary industry, India now has reached a stage where growth pattern of Korea and China can be replicated locally. Recently, two of the private shipyards, i.e., Bharti Shipyard and ABG Shipyard, have raised funds for their capital expansion from the stock market. This will create positive environment for investments in this sector.

Aids to navigation

Presently, there are 169 lighthouses, 1 lightship, 48 radar transponder beacons (racons), 22 deep sea lighted buoys, 22 differential global positioning system (DGPS) stations and 6 long-range navigation (LORAN-C) stations. With the introduction of DGPS, better than 5 metres accuracy in position fixing is available in the entire Indian waters.

The Directorate of Light House and Light Ships is presently establishing 11 new lighthouses,

Further, one vessel traffic service system for the Gulf of Kachchh is under implementation.

Inland water transport

Inland waterways comprising rivers, lakes, canals, creeks, back waters etc extend to about 14,500 km in the country. However, potential of this important mode of transport has not been fully exploited so far. In several countries of the world where development of this mode was given required importance and attention, inland water transport (IWT) has acquired substantial share in inland transport network.

Inland Waterways Authority of India (IWAI)

The IWAI was set up on 27th October 1986 vide Inland Waterways Authority of India Act, 1985, for regulation and development of Inland waterways for the purposes of shipping and navigation. IWAI is primarily responsible for development, maintenance and regulation of national waterways.

National waterways

Earlier, government of India declared three waterways as national waterways. These are:

1. Allahabad-Haldia stretch (1620 km) of the Ganga-Bhagirathi-Hooghly river system (NW-1)
2. Sadiya-Dhubri stretch (891 km) of Brahmaputra river (NW-2)
3. Kottapuram-Kollam stretch of the West Coast Canal along with Champakara Canal and Udyogmandal Canal (205 km) (NW-3)

In November 2008, two more waterways have been declared as national waterways. These are:

1. Kakinada-Puducherry stretch of Canals and the Kaluvelly Tank, Bhadrachalam-Rajahmundry stretch of River Godavari and Wazirabad

Vijayawada stretch of River Krishna (NW-4 1095 km) and

2. Talcher-Dhamra stretch of river Brahmani, Geonkhali-Charbatia stretch of East Coast Canal, Charbatia-Dhamra stretch of Matai river and Mangalgadi-Paradip stretch of Mahanadi delta river system (NW-5, 623 km).

Proposed new national waterway

Barak river stretch from Lakhimpur to Bhanga (121 km) in Assam has been proposed to be declared as National Waterway.

Indo Bangladesh protocol on inland water transit and trade

An inland water transit and trade protocol exists between India and Bangladesh under which inland vessels of one country can transit through the specified routes of the other country. The existing protocol routes are (i) Kolkata-Pandu-Kolkata, (ii) Kolkata-Karimganj-Kolkata, (iii) Rajshahi-Dhulian-Rajshahi, (iv) Pandu-Karimganj-Pandu. For inter-country trade, four ports of call, Haldia, Kolkata, Pandu and Karimganj in India and Narayanganj, Khulna, Mongla and Sirajganj in Bangladesh have been designated in each country. The protocol has been renewed upto 2011 in March 2009 in a bilateral meeting at Dhaka.

Central-sector scheme for IWT sector for North Eastern states

A new central-sector scheme for development of IWT sector in the North Eastern states was introduced by the Planning Commission in 2007.

India has approximately 15,000 km of navigable waterways, out of which 3 stretches covering 2700 km have been declared as national



waterways. India IWT fleet comprises around 350 vessels aggregating to 350,000 DWT.

It is generally acknowledged that IWT is an eco-friendly, cost-effective and fuel-efficient mode of transport with huge potential for employment generation. However, at present the share of IWT in India is only 0.17 per cent of total inland cargo transportation in terms of tonne-km. Inland water transport (IWT) operations are currently limited to a few stretches in the Ganga Bhagirathi-Hooghly rivers, Brahmaputra, the Barak river, the rivers in Goa, the backwaters in Kerala and the deltaic regions of the Godavari-Krishna rivers.

Cruise shipping

The Government of India approved Cruise Shipping Policy on September 22, 2008. Cruise shipping would be a path-breaking development in India's effort to carve a prominent space in world tourism and it would showcase India as a major source and destination of world tourism.

With the implementation of this policy, the growth in diverse sectors will improve and it will earn precious foreign exchange for the country. It will not only generate enormous employment opportunities but will also pro-

mote people-to-people contact, which will enhance India's friendly ties with foreign countries.

Various features of cruise shipping policy include conducive fiscal regime, development of facilities at ports and connectivity through rail, road transport, air and metro, quick completion of immigration formalities, hassle-free custom clearance and proper waste disposal system ensuring cleaner ocean.

Summing up

India with a long coastline, large number of ports and a commendable merchant fleet in the developing nations can emerge as a key player in the arena of shipping. The industry needs to refurbish its resources and modernise facilities. Other factors affecting the industry include world economic conditions, availability of shipbuilding slots with ship yards, age of existing vessels, adoption of new technology, skilled manpower, favourable government regulations etc. These issues need constant attention of the policy makers to enable the shipping industry to significantly contribute to India's overseas trade and economy.

Courtesy: Kaleidoscope magazine, June 2010 issue