



Sagarmala: The Mainstay of Maritime Sector in India

The Sagarmala Programme is the flagship programme of the Ministry of Shipping. As the name suggests, this programme is all about developing the ports to ease transportation of cargo. However, a tête-à-tête with Kailash Kumar Aggarwal, Joint Secretary, Sagarmala Programme reveals how this programme is more about productivity improvement as the Ministry aims to modernize the existing ports, enhance capacities, improve connectivity to ports and ease of doing business at the ports. Additionally, numerous projects are being designed and implemented to improve the lives of coastal communities through necessary training and employment opportunities.

The Sagarmala Programme initiated by the Government envisages port-centric development for which a large outlay has been earmarked. Could you kindly elaborate on the projects that are currently in progress under the Sagarmala Programme ?

Till date, 574 projects have been identified under the Sagarmala Programme that are expected to mobilize roughly Rs. 6.01 lakhs crores of infrastructure investment under the four identified pillars - Port Modernization and New Port Development, Port Connectivity Enhancement, Port Led Industrialization and Coastal Community Development. Out of the 574 projects identified so far, 121 projects (Cost: Rs. 30, 228 crores) have been completed and 372 projects (Cost: Rs. 416,810 crores) are under various stages of implementation. In the year 2019-20, 103 projects (Cost: Rs. 145,940 crores) are expected to be completed.

Promotion of Coastal Shipping is one of top most priority of the Ministry of Shipping under the Sagarmala Programme. The Government wants to increase the modal share of coastal shipping from six per cent to 12 per cent by 2025 as this being is the most economical and environment friendly mode of transport. To achieve the targets, the Government has undertaken several initiatives to promote coastal shipping in the country including relaxation for licensing, financial assistance for creation of infrastructure to promote movement of cargo & passengers by sea or National Waterways. A minimum discount of 40 per cent is offered by major ports on vessel and cargo related charges to coastal vessels, GST has been reduced on bunker fuel from 18 per cent to five per cent, etc. Pursuant to the above, India has witnessed a steady growth of 11.3 per cent of cargo movement on coastal routes from 2015-16 to 2018-19. In 2018-19, it had handled 120 MTPA of coastal cargo compared to 94.5 MTPA in 2016-17 (14% increase) and is expected to reach 250 MTPA by 2025.

Besides, Government of India has identified 106 inland waterways to be National Waterways (NWs) apart from the existing five NWs. Out of total 111 NWs, work at 13 NWs have been taken up and studies at others are underway.

The Ministry has also come up with the Coastal Berth Scheme that has been extended up to March 2020 and its scope has been expanded to cover the cost of preparation of the Detailed Project Report (DPR) and capital dredging at the major ports. This scheme was also integrated into the Sagarmala Programme. The construction of berth or jetties



for passenger ferries and hovercrafts or seaplanes may include construction of terminal building and allied facilities. Financial assistance to be given up to 50 per cent of the total project cost or maximum funding limit, whichever is lower. This may be relaxed for Union Territories where other sources of funding are not available. The balance expenditure will be incurred by the respective Ports or concerned State Governments (including State Maritime Boards) from their own resources.

Can you walk us through the pillar-wise development that is taking place under the Sagarmala Programme?

Port Modernization:

Since about more than 90 per cent of India's trade by volume is conducted via the country's maritime route, there is a continuous need to develop India's ports and trade-related infrastructure to accelerate growth in the manufacturing industry and to assist the 'Make in India' initiative. India has 12 major ports and approximately 200 non-major ports administered by Central and State Governments, respectively.

As per the studies conducted under the Sagarmala Programme, it is expected that by 2025, cargo traffic at Indian ports will be approximately 2500 MMTPA while the current cargo handling capacity of Indian ports is about 1800 MMTPA. A roadmap has been prepared for increasing the Indian port capacity to 2500 MMTPA by 2025 to cater to the growing traffic. This includes port operational modernization, capacity expansion of existing ports and new port development.

A total of 236 projects have been identified to enhance the port capacities and efficiencies of port operations worth Rs. 1.18 lakhs crores. Of these, 68 projects (Cost: Rs. 22,551 crores) have already been completed and 70 projects (Cost: Rs. 36,998 crores) are under implementation.

A total of 39 projects (Cost: Rs. 1,569 crores) have been sanctioned under the Coastal Berth Scheme for total with financial assistance of Rs. 637 crores and Rs. 351 crores have been released.

Port Connectivity:

Connectivity is one of the critical enablers for ports and the end-to-end effectiveness of the logistics system drives competitiveness for the maritime industry as well. With

infusion of new technology and capacity building, the cumulative or total capacity available at ports can match demand but will not be able to handle additional traffic if the evacuation to and from the port is restricted. It is, therefore, important that connectivity of major ports with the hinterland is augmented to meet the present requirements as also of projected increase in traffic.

India's hinterland connectivity is mainly based on surface transport, i.e., road and rail, wherein, domestic waterways (coastal shipping and inland waterways) plays a very limited role. Pipelines are predominantly used for transporting crude oil, refined petroleum products and natural gas.

Smooth connectivity to ports is even more important as the cargo generating centres are mainly in the hinterland. The long lead distance increases the logistics cost and time variability within which the cargo can be delivered.

Under Sagarmala Programme, the endeavour is to provide enhanced connectivity between the ports and the domestic production or consumption centres. Till date, more than 7,000 km of road and 8,348 km of rail network have been planned.

A total of 235 projects (Cost: Rs. 235,528 crores) has been identified to improve the connectivity to Indian ports. Of these, 35 projects (Cost: Rs. 5,803 crores) have already been completed and 94 projects (Cost: Rs. 119,360 crores) are under progress.

Fifteen Multi-Modal Logistics Parks (MMLPs) are being developed at a cost of around Rs. 3,703 crores. Out of these 15 MMLPs, four MMLPs (Cost: Rs. 689 crores) have been implemented and five MMLPs (Cost: Rs. 1,481 crores) are under implementation.

Port-led Industrialization:

The vision of the Sagarmala Programme is to reduce logistics cost and time for the movement of EXIM and domestic cargo. Development of port-proximate industrial capacities near the coast is a step in this direction. In this regard, the concepts of Coastal Economic Zones (CEZs), Coastal Economic Units (CEUs), port-linked Industrial & Maritime Clusters and Smart Industrial Port Cities have been introduced.

A total 35 projects (Cost: Rs. 240,234 crores) have been identified for port-led industrialisation. Of these 35 projects, two projects (Cost: Rs. 512 crores) have been completed and 17 projects (Cost: Rs. 151,745 crores) are under implementation.



For promoting port-led industrialisation, 30 potential port-linked industrial clusters across three sectors - energy, materials and discrete manufacturing have been identified. Further, SEZ at JNPT, Smart Industrial Port City (SIPC) at Paradip and Kandla are under implementation and Coastal Employment Units (CEUs) at VO Chidambaranar Port and Kamarajar Port are under development.

Coastal Community Development:

Under the Sagarmala Programme, an integrated approach is being adopted for improvement in quality of life with focus on skill building and training, upgrading of technology in traditional professions, specific and time bound action plan for improving physical and social infrastructure in collaboration with the coastal states.

A total of 68 projects (Cost: Rs. 7,369 crores) have been identified for coastal community development. Of these, 16 projects (Cost: Rs. 1362 crores) have been completed and 20 projects (Cost: Rs. 945 crores) are under implementation.

Also, coastal shipping and inland waterways transport (IWT) is being treated as the fifth and emerging pillar by the Ministry that will entail a sustainable and eco-friendly mode of transport. A potential of additional 250 MMTPA by 2025 has been identified under this pillar and the focus is to introduce various initiatives to promote this mode. These include:

- Relaxation in licensing for foreign flag vessels to transport fertilisers, agricultural products and EXIM containers for trans-shipment in India on coastal routes under Sections 406 and 407 of the Merchant Shipping Act
- Licensing relaxation for special vessels such as RO-RO, RO-pax, ODC, etc. has been extended till 2020
- Priority berthing policy for coastal vessels has been notified to reduce turnaround time for coastal vessels and improve their utilisation
- A discount of minimum 40 per cent is offered by the majorports on vessel and cargo-related charges to vessels carrying coastal cargo. For the case of Ro-Ro car carriers, this discount is extended to the tune of 80 per cent
- GST Reduced on bunker fuel from 18 per cent to five percent.
- Grant-in-aid assistance to develop berths and associated infrastructure including dredging, break-water creation and mechanization under the coastal berth scheme has been extended till 2020.

Pursuant to the above, India has witnessed a steady growth of 11.3 per cent of cargo movement on coastal routes from 2015-16 to 2018-19. In 2018-19, it had handled 120 MTPA

of coastal cargo compared to 94.5 MTPA in 2016-17 and is expected to reach 250 MTPA by 2025.

To unleash the optimal potential of the sector, the Ministry of Shipping has undertaken a perspective plan on coastal shipping in association with Asian Development Bank in July 2019 that will form the basis of infrastructure development over the next decade.

The adoption of coastal shipping has been beneficial to the environment as it is less polluting e.g., Gogha Dahej Ro-Ro ferry service is expected to save logistics cost with projected with an annual fuel saving of 15,202 kilo litres. It would help in environmental sustainability by reducing CO2 emission of about 48,800 MT per annum.

Coastal Community Development has been envisaged as an important pillar of the programme. What initiatives have been taken in this regard Could you also highlight details of the upcoming steps being taken in this regard?

Approximately 18 per cent of India's population lives in the 72 coastal districts that comprise 12 per cent of India's mainland. Development of coastal communities through marine sector related activities like fisheries, maritime tourism and corresponding skill development is an essential objective of the Sagarmala Programme. Development of cruise tourism and lighthouse tourism are other activities that are being actively considered under the Sagarmala Programme.

Under the programme, an integrated approach is being adopted for improvement in quality of life with focus on skill building and training, upgrading of technology in traditional professions apart from creating a specific and time-bound action plan for improving physical and social infrastructure in collaboration with the coastal states. The main features of Coastal Community Development plan consist of the following:

- Skill development
- Coastal tourism
- Development of fishing harbours
- Research and development in the port and maritime sectors

On the skill development front, Ministry undertook skill gap analysis in 21 coastal districts and is now implementing it. Additionally, the Ministry is funding skill development projects under Deen Dayal Upadhyaya-Grameen Kaushalya Yojana (DDU-GKY) to train 10,000 persons annually for the next three years.



To promote cruise tourism in India, the Ministry has taken some initiatives. A Cruise Passenger Facilitation Centre has been developed at the Chennai Port. Also, at the Cochin Port, a Cruise Berth cum Passenger Facilitation Centre has been developed while work on the International Cruise Terminal is still in progress. Upgrading and modernization of the Cruise Terminal at Mumbai is also under implementation.

To improve livelihood of the fishermen community, the Ministry is also partially funding select fishing harbour projects in convergence with Department of Animal Husbandry and Dairying (DADF). A total of Rs. 398.46 crores has already been sanctioned for 16 projects (Cost: Rs. 1452 crores).

To boost indigenous research, the Ministry has set up the National Technology Centre for Ports, Waterways and Coasts (NCPWC) at IIT Madras in Chennai. To provide innovative and research-based engineering solutions for the port and maritime sector, a Centre for Inland and Coastal Marine Technology (CICMT) has been set up at IIT Kharagpur. Till date, 68 projects worth Rs 7,369 crores have been identified for coastal community development. Of these, 16 projects (Cost: Rs. 1,362 crores) have been completed and 20 projects (Cost: Rs. 945 crores) are under implementation.

Is the Ministry planning to take steps to educate their workforce or impart any specified skill-based techniques?

Skill development is essential to induce efficiency in maritime operations. The Ministry is currently working on its vision to ensure 100 per cent skilled manpower in the sector. Multi-skill development centres (MSDCs) are being set up in the ports under the Pradhan Mantri Kaushal Kendra (PMKK) programme, in conjunction with the Ministry of Skill Development and Entrepreneurship (MSDE), to skill people in the port premises so that they may be employed in various port operations. The first such MSDC has been set up at the Jawaharlal Nehru Port Trust (JNPT) on March 08, 2019. Centres set up at the Chennai Port, Cochin Port and Vishakapatnam Ports are in advanced stages of development. The Ministry aims to set up these centres in all the major ports.

For skill development of coastal communities, the Ministry of Shipping is funding skill development under DDU-GKY to train 10,000 persons annually for next three years at 21 coastal districts. Training programmes have been started in Andhra Pradesh, Kerala and Tamil Nadu. In phase I of the programme, 1978 candidates have been trained and 1143 candidates have already found employment.

To ensure technology-based skill development we have setup Centre of Excellence in Maritime & Shipbuilding (CEMS) with two campuses at Vizag and Mumbai that are operational since February 2019. This will provide for skilled manpower in ship building and ship repair.

The world's biggest ship recycling yard at Alang is also a good example of coastal community development. Unskilled workers are not allowed to enter the yard unless they have completed the training mandated by the programme. The workers at the Alang ship breaking yards are being trained on a continuous basis. More than 23,000 people have undergone trainings so far.

While the broad concept of the Sagarmala Programme was promulgated at its launch and has been upgraded midway, what is the current focus area over the next four to five years?

The current focus area for Ministry of Shipping for the next focus years is

- Promotion of Coastal shipping & Inland Waterways in line with ADB Coastal Shipping study as it is the most cost efficient and environment friendly mode of transport
- Development of SIPCs at Kandla, Paradip and CEUs at VO Chidambaram and Kamarajar Port
- Development of multi modal logistics parks at 15 locations
- Development of Vadhavan Port in Maharashtra as the first Green Smart Port, which is going to be among the best 10 ports in the world
- Promotion of international cruise tourism
- Digitization of various processes in maritime and ports industries, etc.
- Making ports more efficient and ensuring ease of doing business.

In terms of project award and implementation, what is the status of the Sagarmala Programme?

As on date, 322 projects (Cost: Rs. 339,275 crores) have been awarded out of which 121 projects (Cost: Rs. 30,228 crores) have been completed and 201 projects (Cost: Rs. 309,047 crores) are under implementation.



Jal Marg Vikas Project: A Potential Game Changer for India's Logistics



India's logistics industry is witnessing a major shift as multimodal terminals are being planned on the country's national waterways and freight villages set up to ease transportation of cargo. During a conversation about the current project activities surrounding the country's inland waterways network, Shri Pravir Pandey, Vice Chairman of IWAI and Project Director of Jal Marg Vikas Project explains how developing waterways will redefine freight movement as the country gears up for a modal shift from the roads and rails to its rivers.

What is the overall aim of the Jal Marg Vikas Project and what all does it encompass?

The Government of India is aggressively pushing for the development of inland waterway routes as part of an integrated transport network strategy.

The Hon'ble Union Finance Minister, in his Budget Speech for 2014-15 had announced the Jal Marg Vikas Project (JMVP) on National Waterway-1 (NW-1) to enable commercial navigation on the Varanasi-Haldia stretch of the river Ganga. Soon after, began the capacity augmentation on NW-1 under the JMVP with the technical assistance and investment support of the World Bank at an estimated cost of Rs. 5369 crores. Close to Rs. 2000 crores worth of work is already on

ground on National Waterway-1. Of the three multimodal terminals that were planned to be built on river Ganga under JMVP, the one at Varanasi in Uttar Pradesh and Sahibganj in Jharkhand are already operational. Work on the third multimodal terminal at Haldia and a new Navigation Lock at Farakka (both in West Bengal) is on in full swing.

The NW-1 along with the proposed Eastern Dedicated Freight Corridor and NH-2 constitute the Eastern Transport Corridor of India connecting the National Capital Region (NCR) with the eastern and north-eastern states. Additionally, they will function as a link to Bangladesh, Myanmar, Thailand, Nepal and other east and Southeast Asian countries through the Kolkata Port and Indo- Bangladesh Protocol Route.

According to World Bank economic analysis, approximately 1.5 lakh direct and indirect employment opportunities will be created due to interventions under the JMVP in the states of Uttar Pradesh, Bihar, Jharkhand and West Bengal.

Under the Jal Marg Vikas Project, the second multimodal terminal at Sahibganj, Jharkhand has recently been inaugurated by the country's PM. Please shed light on the operating model of these terminals worked upon and those under construction?

The Phase -1 of the multimodal terminal at Sahibganj was inaugurated on September 12, 2019. Built at a cost of Rs. 290 crores in a record time of about two years, the Hon'ble Prime Minister himself had laid the foundation stone of the IWAI's Sahibganj multimodal terminal in April 2017.

The MMTs are being built as part of the government's JMVP that aims to develop the stretch of river Ganga between Varanasi to Haldia, for navigation of large vessels up to 1500-2000 tonnes in weight, by maintaining a draught of 2-3 metres in this stretch of the river and setting up other systems required for safe navigation.

The convergence of road-rail-river transport at Sahibganj through the new multimodal terminal will connect this part of the hinterland to Kolkata, Haldia and



further to the Bay of Bengal. Also, Sahibganj will get connected to North-East States through Bangladesh by river-sea route. It will open industries of Jharkhand and Bihar to the global market and provide Indo-Nepal cargo connectivity through the waterways route.

Jharkhand is richly endowed with mineral resources. The multi-modal terminal at Sahibganj will play an important role in transportation of domestic coal from the local mines in the Rajmahal area to various thermal power plants located along NW-1. Other than coal, stone chips, fertilisers, cement and sugar are other commodities expected to be transported through the terminal.

The multimodal terminal will also help create direct employment of about 600 people and indirect employment of about 3000 people in the region. The capacity of the terminal is 3 MMTPA. It will grow to 5.48 MMTPA after an investment of Rs. 376 crores for capacity enhancement in Phase II under PPP model. The development in Phase II will be entirely made by a private concessionaire.

A freight village is being proposed adjacent to the Sahibganj multimodal terminal like the one planned at Varanasi. Can you share some information about this project ?

It is true that a freight village is also proposed on 335 acres of land in contiguity with the multimodal terminal at Sahibganj. On waterways, the last leg connectivity is very critical, and a large part of success is thus dependent on generating cargo from satellite terminals along the way. Currently, the IWAI is involved in bidding out terminals to private players who can manage and run the terminals. At Varanasi and Sahibganj, we are trying to address this issue by constructing a freight village that will serve as a cargo hub and a centre for cargo aggregation and value addition. It will also supplement the development of third-party logistics and supply chain solutions. The freight village will be available for multimodal movement through road, railway and water. We will develop necessary infrastructure at more locations for the private players to operate.

How many people are expected to benefit from employment opportunities post creation of the Inland Waterways Transport (IWT) hubs at both Varanasi and Sahibganj ?

The JMVP envisages large investment and employment opportunities in the four states through which the NW-1 will pass. As mentioned earlier too, the economic analysis for the loan appraisal by the World Bank has concluded that the project would lead to extensive economic and social development of the hinterland along the banks of river Ganga. Employment opportunities for around 50,000 persons are expected to be generated in Uttar Pradesh and Bihar each, around 56,000 in West Bengal and close to 5000 in Jharkhand.

The IWAI does not have enough vessels to meet its cargo target of 150 million tonnes by 2023. Does the IWAI plan to add more vessels to its existing fleet ?

Though our primary job is to make the waterways navigable and equipped for vessels to sail, we have taken a big step towards building confidence in the key players to use waterways as their choice for transportation. Through the World Bank procurement process, we engaged DST Germany to design ideal ships for transport on the river Ganga. DST Germany has come up with 13 classes of ships ideally suited for the river Ganga that include bulk cargo ships, barges, container ships and car carriers, etc. These require low draught but have a carrying capacity ranging from 600 to 2450 tonnes of cargo. After a series of discussions with IIT Kharagpur, we have displayed these general arrangement designs free of cost on our website so that any ship builder can refer to them. To give you an estimate, an investment of Rs. 30-50 lakhs is needed to design a new ship. That is a direct saving that would accrue to the private sector who would use the DST Germany designs to manufacture riverine vessels. I strongly believe that it is the private sector, which will have to take lead to make this sector more lucrative.

