

THE SAGARMALA POST



 MINISTRY OF SHIPPING, GOVERNMENT OF INDIA

MARCH 2017 VOL.-II



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From the Secretary's Desk



As the Sagarmala Programme moves from the planning to the implementation stage, I am delighted to share with you, the second edition of The Sagarmala Post.

Out of the 400+ projects identified under Sagarmala, more than 200 projects are under various stages of implementation and development. Ministry of Shipping is actively coordinating with the concerned Line Ministries and State Governments to take forward the other projects.

Enhancing the port connectivity to hinterland and increasing the share of domestic waterways (inland waterways and coastal shipping) are key objectives of the Sagarmala Programme. In this regard, Ministry is taking multiple steps to develop the 111 National Waterways in the country. Some of these inland water transportation projects have been highlighted in this edition, including transportation of automobiles on National Waterway 1 (Ganga) and Multimodal Terminal at Sahibganj.

To ensure the holistic and sustainable development of India's coastal communities, Ministry of Shipping is taking up multiple skill and fisheries development projects under Sagarmala. One of the projects highlighted in this edition, new fishing harbour at Kulai - an initiative to be funded partly by the Ministry of Shipping under Sagarmala Programme in convergence with Department of Animal Husbandry, Dairying & Fisheries (DADF). The fishing harbour project will help in addressing the difficulties of the fishermen and will enhance the efficiency of the New Mangalore Port.

Gujarat, which pioneered the concept of port-led development in India, is the focus State in this edition. As part of Sagarmala, more than 40 projects, at an estimated investment of INR 85,000 crore, have been identified in Gujarat. Approx INR 100 crore have been released under Sagarmala for 4 projects, namely Capital dredging for Gogha-Dahej Project, Coastal berth at Navlakhi & Porbandar and Safety training to workers in Alang ship breaking yard.

As with every issue of The Sagarmala Post, we actively seek feedback from our readers. We invite you to share your observations with us through email or connect with the Sagarmala Programme on Social Media (Facebook and Twitter) to get latest updates on our various initiatives.

RAJIVE KUMAR, IAS
Secretary, Ministry of Shipping

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Spotlight

Automobile Transportation on Ro-Ro Vessels on NW-1 (River Ganga)

India has around 7,500 km of coastline and over 14,000 km of navigable waterways. However cargo movement in India through domestic waterways is negligible. Coastal shipping and inland waterways currently form around 6 percent of the total modal mix in India, compared to around 10-20 percent for other emerging countries. Considering this, the Sagarmala Programme aims to harness the potential of inland waterways and promote coastal shipping of cargo in the country.

As a trial run, two cargo vessels, from Varanasi, on National Waterway-1 were flagged off by Shri Nitin Gadkari, Minister of Shipping, Road Transport & Highways.

The first Ro-Ro vessel MV V.V Giri (300 tons capacity) carried newly assembled cars of Maruti Suzuki India Ltd. from Varanasi to Kolkata. The voyage of this vessel was completed in six days. This trial run has revealed that automobile manufacturers can expect significant cost benefits if they choose inland waterways over rail and road. It is estimated that logistic costs of upto INR



Photo credit IWAI

Transportation of Maruti Cars

5000 per car can be saved if automobile companies prefer NW-1 for regular transportation.

Several car makers including Honda and Mahindra have also expressed interest in transporting cars on NW-1.

The second vessel MV Joy Basudev (1400 tons capacity) carried construction material from Varanasi and offloaded the material at Ghazipur and Patna.

Meanwhile, DST, a German company has been given the contract to design shallow draft vessels that can navigate in low draft with different types of

cargo, including automobiles. The shallow draft vessels will be crucial in the upper reaches between Patna and Varanasi where the river is not very deep.

The Ministry of Shipping is developing NW 1 under the Jal Marg Vikas Project with assistance from the World Bank at an estimated cost of INR 5,369 crore. The project includes the development of navigable channels, setting up of multi-modal terminal at Sahibganj, Varanasi & Haldia, modernisation of the river navigation system and construction of navigation locks at Farakka.

Spotlight

Multimodal Terminal at Sahibganj on River Ganga

The Sagarmala Programme under the Ministry of Shipping, lays emphasis on developing inland waterways in the country that will result in reducing the logistics cost of transportation of goods and passengers.

In addition to the existing 5 National Waterways, the National Waterways Act, 2016 has declared 106 new national waterways. Out of 111 National Waterways, 37 have been prioritized for development in the

first phase. The Ministry of Shipping, Government of India, under IWAI (Inland Waterways Authority of India) plans to construct 2000 water ports on these waterways to ease the traffic on the rail/roads. In order to enhance the use of these inland waterways, sea planes, hovercrafts and amphibious buses would be introduced as part of the Sagarmala Programme. According to Shri Nitin Gadkari, Minister for Shipping, Road Transport & Highways, the inland waterways will prove to be a game changer by reducing the cost of transportation for goods and passengers, thus leading to reduced road & rail congestion and pollution.

Taking a step in this direction, IWAI has taken up various projects for developing infrastructure along the existing National Waterways. One of the projects identified is construction of Multi modal Terminal at Sahibganj (Jharkhand).

The Multi modal Terminal will be connected with NH-80 and with Sakrigali railway station. The Major cargo handled will be coal, stone chips, food grains, cement, fertilizer, sugar.

The Estimated Employment generation from development of Multi modal Terminal at Sahibganj is 600 direct employment and more than 10,000 indirect employment.

Highlights

- **111 National Waterways (NWs) in the country**
- **5 NWs (NW-1 to NW-5) were declared between 1986-2008**
- **106 NWs were declared under the National Waterways Act, 2016**
- **World class cruise services on National Waterway-1 and National Waterway-2 and Indo-Bangladesh Protocol Route**

Project Highlights

- **Project Cost: ₹ 280 Crore**
- **Cargo handling capacity of 22.4 Lakh Tonnes per year**
- **Date of completion: June 2019**
- **Facilities would include:**
 - **Berthing space for two vessels**
 - **Stockyard**
 - **Conveyor belt**
 - **Barge loaders**
 - **Jetty Structures - 270m x 25m**
 - **Terminal Administration Building**
 - **Internal roads and vehicle parking area**

Spotlight

Skill Development of Coastal Communities

The Ministry of Shipping is implementing the Sagarmala Programme for transforming India's coastal districts to make them engines of India's socio-economic development. Coastal Communities are key stakeholders in the Sagarmala Programme. The primary aim of skill development is to bring a tangible change in the core competencies of the workforce and provide them better living standards.

Under Sagarmala, a budget of INR 100 Crore has been allocated for coastal community development activities. **The key skill development projects** to be undertaken under the Sagarmala Programme are:

Skill Gap Studies of 21 Coastal Districts:

Understanding the skill requirements for different regions is the first step. In this regard, Skill Gap study of 21 Coastal Districts has been commenced. Out of the 21 districts under study in the first phase, skill gap studies for 19 districts have been completed and the study for remaining 2 districts and districts action plans for all districts will be completed by April 2017.

Sagarmala-DDU GKY Skill Training:

Sagarmala is collaborating with the Ministry of Rural Development's flagship Deen

Dayal Upadhyay Grameen Kaushalya Yojana (DDU GKY) to implement skill training based on the need of the industry and youth aspiration in the Coastal Areas. Skill training is being implemented in 22 districts of 5 states - Andhra Pradesh, Karnataka, Maharashtra, Odisha and Tamil Nadu. Out of a total planned target training of 2130 persons, 738 trainees have been trained in 35 trades, 390 trainees have been placed and 624 are currently undergoing training.

Alang- Ship Recycling Occupational Safety and Health Training:

In order to ensure growth of the industry and welfare of workers, Ministry of Shipping is undertaking the Alang Ship Recycling Occupational Safety and Health Training. 466 workers have been trained since January 2017 and INR 50 lakh has been utilized. The project will continue till all the workers are trained.

Logistics Multi Skill Development Centre in JNPT Mumbai:

Portage evacuation and efficient logistics are key goals under Sagarmala. The sector provides huge employment opportunities. The well trained manpower has an exponential impact in reducing the costs. In this regard, the JNPT, Mumbai in association with logistics sector employers is setting up a Logistics Multi Skill

Development Centre in Mumbai. This centre will be run in collaboration with the Ministry of Skill Development and Entrepreneurship's flagship program - Pradhan Mantri Kaushal Kendra (PMKK) program.

Setting up of Siemens-IRS Centre of Excellence:

Shipbuilding and repair industry requires specialised skills. The Ministry of Shipping, in partnership with Siemens and the Indian Register of Shipping (IRS), is setting up Siemens-IRS Centre of Excellence - a first of its kind centre in South East Asia. This will be a state of the art facility for the shipbuilding industry and will promote fast-paced growth.

Cutting edge skills in Port and Maritime Sector

Cutting edge skills are in short supply. However, these skills are necessary to transform the Port and Maritime sector. Therefore, 29 cutting edge skills have been identified and further study is being undertaken to identify specific skills demanded by ports and shipyards.

An overarching goal of the skill development under Sagarmala is to meet the skill needs of industries in the port and the maritime sector. Providing the coastal communities with the right skills will increase their opportunities for livelihood and improve their living standards.

Sagarmala Project's Update

Development of Fishing Harbour at Kulai, Karnataka

One of the key objectives of the Sagarmala Programme is the holistic and sustainable development of coastal communities, especially fishermen population. In this regard 23 projects costing more than INR 4200 Crore have been proposed.

With the commissioning of the New Mangalore Port Trust, the fishing vessels belonging to Kulai and the nearby villages started operating from old Mangalore fishing harbour. These fishing vessels take shelter inside the New Mangalore Port during monsoon, causing inconvenience for the port operation, creating security issues and hindrances that may cause accidents. The development of Fishing Harbour at Kulai is being considered in convergence mode of implementation with sharing of Central financial liability between CSS on Blue Revolution : Integrated development and management of Fisheries of



Present view of Kulai fishing harbour

Department of Animal Husbandary, Dairies and Fisheries (DADF) and Sagarmala Programme of Ministry of Shipping. The remaining financial liability is to be shared between New Mangalore Port Trust and State Government of Karnataka. Kulai has a fish handling capacity of 27,100 MT/Annum and is

located near a Government Ice Plant. At an estimated project cost of INR 196.51 Crore, the proposed fishing harbour will provide quay & jetty, dredging & reclamation, breakwater, fish handling & auction halls, fish loading area, administration office and fishermen rest shed, etc.

The project will not only help in addressing difficulties of displaced fishermen by providing them with a modern fishing harbour with allied facilities but also enhance the port efficiency and security. This will also bring about improvement in socio-economic condition of fishermen in the coastal region of Mangalore.

Of the total fishermen population of Karnataka, 96,853 people are actively engaged in fishing and associated activities. Development of the Kulai Fishery Harbour project is a step towards sustainable Coastal Community Development under the Sagarmala Programme.



Artistic view of Kulai fishing harbour after Modernization

Sagarmala Project's Update

Second Multi Liquid Terminal (MULT II) at Kamarajar Port

Ennore Port, officially renamed Kamarajar Port Limited, is located on the Coromandel Coast about 24 km north of Chennai Port. The Kamarajar Port Limited is the only corporatised major port and is registered as a company. The Centre holds a stake of about 68% in the Kamarajar Port Limited and the remaining 32% is held by the Chennai Port Trust.

Kamarajar Port Limited (KPL) is operating as a landlord port and is mainly responsible for overseeing the port's development and management. The Port at present has five operating berths, which includes two coal berths for exclusively handling coal for Tamil Nadu Electricity Board (TNEB); one coal berth for multi-users (non-TNEB); one berth for the export of automobiles and one Multi-User Liquid terminal. The sixth berth has been lying idle due to a ban on iron ore exports.

Need for a 2nd Multi-User Liquid Terminal

Multi-User Liquid Terminal I (MULT I) was commissioned in January, 2009 to handle the traffic of POL Products, Chemicals and Liquefied Petroleum Gas (LPG) in Kamarajar Port. However since 2010, there has been an almost six-fold increase in product traffic handled by MULT I. In 2010 the total volume of bulk traffic was 5,888,940 which rose to 33,17,143 in 2014-15.

The acceptable berth occupancy of a Multi-User Liquid Terminal is 65%, which was crossed during 2013-14. Berth occupancy rose to 85% during 2014-15 year, greatly affecting the efficiency of cargo movement and causing delays for all users.

Furthermore, it has been estimated that by 2020 the projected traffic would increase to 8.00 MTPA while the assessed optimum capacity of MULT I is 2.5 MTPA. To fill the gap of 5.5 MTPA, IOC's captive berth would be used for handling around 3.0 MTPA of traffic. The need for the second Multi Liquid Terminal was assessed to enable the port in handling the remaining 2.5 MTPA of traffic. The tentative capital cost of building MULT II has been pegged at INR 3211 crore.

Location and Architectural Design of MULT II

MULT II would be located adjacent to the existing MULT I berth. The associated tank farm will be located in a 33-acre plot north of the tank farm area of MULT I and this will be about 4.3 km from the jetty.

The berthing face will be located at about 150 m from the centre line of the breakwater and will be in line with the berthing face of MULT I.

Mooring and Berth Dolphins in MULT II

MULT II would have a conventional type berth with a service platform, four berthing and four mooring dolphins. The berthing dolphins will be provided with rubber fenders and bollards while the mooring dolphins will be provided with quick release hooks.

The service platform will be served by an approach trestle linked to the pipeline trestle of IOC captive berth which will be designed to accommodate the pipelines of MULT II also.

Robust Topside Facilities for the Jetty

The jetty would have two marine unloading arms of 12" diameter to

handle POL Products (white oil and black oil). These shall be designed and constructed according to OCIMF standards.

MULT II will have six pipelines with varying diameters, which will be connected to the unloading arms through pipeline manifolds.

State of the Art Fire Fighting System

The berth will be provided with a fire-fighting system comprising tower monitors, jumbo curtain nozzles and hydrants as per OISD 156. The fire fighting system shall be based on seawater which is available immediately adjacent to the berth. The facilities shall comprise two separate systems – tower monitors & water curtains, hydrants and ground monitors. Accordingly, two separate sets of pumps shall be provided one for each system.

Tank farm for MULT II

It was initially felt that MULT II will not need a tankage, as most of the traffic was being efficiently managed between MULT I and pipelines outside the port. However, since MULT II was being developed as a competing facility under the PPP model, it is being deemed necessary to build at least one tankage in the facility. This is being done to build MULT II into an independent facility with full-scale services.

The tank farm will have all other infrastructure and service facilities required for the effective functioning of a tank farm, including a fully functioning administrative office, weigh bridge, TLF sheds, Security house and gate complex, interconnecting pipelines, transformers for power supply, slop tank, effluent treatment plant, DG set etc.

State Focus Gujarat

Gujarat has been at the forefront of India's maritime development. Under the Sagarmala Programme, more than 40 projects, with an estimated cost of approximately INR 85,000 Crore have been identified across the four pillars of Port Modernization & New Port Development, Port Connectivity Enhancement, Port-led-Industrial Development and Coastal Community Development in Gujarat.

A) Port modernization: Projects have been identified for capacity augmentation at existing ports, especially Kandla to meet the future growth in cargo volumes. These include:

- Mechanization of the cargo handling process,
- Development of a multi-purpose berth
- Setting up of a barge and coastal jetty to name a few.

B) Port connectivity: For enhancing port connectivity to the hinterland and creating an optimal mode of evacuation to/from ports, several connectivity projects have been identified. These include:

- Port- rail connectivity projects, including the connection of western DFC to Hazira, Pipvav & Mundra; providing broad Gauge Rail linkages to Old Bedi Port and other internal rail connectivity projects for Kandla.
- Port-road connectivity projects & RoB at the Kandla Kutchh Road, constructing an alternative road from



Photo credit Kandla Port Trust

Bhavnagar to Sosiya - Alang Ship Recycling Yard and other internal port road connectivity projects

- Freight expressway projects like connecting Sarkhej in Ahmedabad to Mundra, Pipvav & JNPT
- Expansion of the Salaya Mathura Pipeline
- Dedicated coastal berth for passenger/cargo by sea at Porbandar Port

C) Port led-industrialization: To leverage the ports for aiding industrialization and facilitating export-oriented manufacturing in the state, 7 projects have been identified. These include:

- Building major industrial clusters like petrochemical cluster, cement cluster, an export based apparel cluster in Saurashtra, an auto cluster

in Sanand, a marble based furniture hub in Kutch and a Maritime cluster in Gujarat

- Development of a coastal economic unit (CEU) with Kandla as the nodal port
- D) Coastal community development:** To ensure sustainable socio-economic development in the State, projects have been identified for the development of its coastal community. These include:
- Development of the Gujarat Maritime University
 - Dredging of Ro - Pax Ferry Services between Gogha and Dahej in the Gulf of Cambay
 - Training Program for skill development/ capacity building of workers involved in ship recycling activities at Alang

State Focus Gujarat

Kandla Port about to get a complete makeover

Kandla Port, built on the Kandla Creek, is located at a distance of 90 km from the mouth of the Gulf of Kutchh. As a protected natural harbor, Kandla port has played a significant role in the economic prosperity of the region.

The foundation of the Kandla Port was laid by Maharao Khengarji III, who built an RCC Jetty, which could berth ships with 8.8 meter draft all round the year. Its importance was greatly enhanced, when it was declared as a Major Port in 1955 by the late Lal Bahadur Shastri, the then Transport Minister.

Kandla Port is one of the 12 Major Ports identified for modernization



Photo credit Kandla Port Trust

under the Sagarmala Programme. A number of developmental projects have

been identified and are at various stages of implementation.

Sr. No.	Name of the projects	Project Cost (Rs. In Cr.)	Capacity (MMTPA)
1.	Development of oil jetty 7 at Kandla Port	42.40	2.00
2.	Development of Oil Jetty 8 for handling Liquid Cargo	200.00	2.25
3.	Development of Marine Liquid Terminal facilities at OOT, Vadinar on captive use basis	448.00	24.5
4.	Development of Container Terminal facility at Berth 11 and 12	159.81	0.60MTEUs
5.	Development of 14th Multipurpose Berth	253.00	4.50
6.	Development of 16th Multipurpose Berth	278.00	4.50
7.	Mechanization of Fertilizer Handling Facility at Kandla	120.94 (including O&M for 8 years)	1.40 (Project-1)
8.	Mechanisation of Food Grains Handling Facility at Kandla	155.00	2.50
9.	Mechanization of Barge Unloading Facility at Kandla	100.00	2.00
10.	Development of Ro-Ro Terminal at Kandla Port		
11.	Development of Tuna Tekra Container Terminal at Kandla -Phase -I&II	2500	2.19MTUEs
12.	Development of Tuna Tekra Additional Bulk Terminal-Phase-I& II	1400	18.00

State Focus Gujarat

New Liner Services from Kandla Port

Kandla International Container Terminal (KICT) celebrated its first vessel arrival on the 4th February 2017. The weekly service is the first direct common carrier feeder service between Saudi Arabia and India and will connect the Kandla Port directly with Jebel Ali in Dubai and Dammam and Jubail in Saudi Arabia. The new terminal at Kandla with state-of-the-art infrastructure is expected to boost trade at Kandla port.

The port has been greatly contributing to the economic progress of the country. In the year 2015-16 Kandla handled 100 million ton cargo.

KPT has also inked a MOU with the Government of Gujarat for development of Smart Industrial Port City.



Photo credit Kandla Port Trust

Gujarat Maritime Board

Gujarat has played a pivotal role in developing the maritime infrastructure of India. Since its establishment in 1982 and the enactment of the country's first Port Policy in 1995, the Gujarat Maritime Board (GMB) has taken up various initiatives for the development of greenfield ports, captive jetties, shipyards and private jetties. This policy has fueled private sector investment in the State and has changed the

maritime landscape of Gujarat.

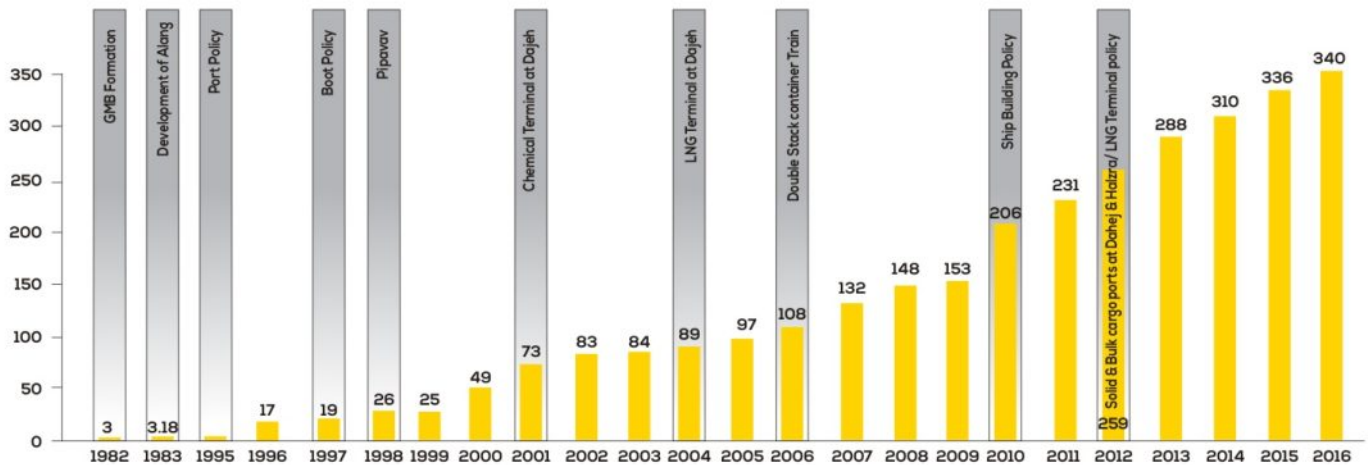
During the FY 2015-16, the non-major ports of Gujarat regulated and operated by GMB handled a total cargo of 340 MMTPA (which was 83 MMTPA in the year 2001-02) constituting to about 32% of the cargo collectively handled by Indian ports. The capacity of Gujarat ports has increased from 135 MMTPA in 2001-02 MMTPA to 466 MMTPA in 2015-16, growing at CAGR of 9.25%.

Gujarat's maritime growth story can be deliberated on following phases –

Capacity addition phase: The first phase of development witnessed during the 1990s was fueled by pioneering policy framework (Port Policy 1995 & BOOT Policy 1997), which helped in bringing private players to develop “best in class” port terminals through a strong policy framework.

State Focus Gujarat

Cargo traffic growth and policy impetus during the period



Focusing on port led region development: The second phase focussed on hinterland development. It is worth appreciating the fact that Gujarat was the first state to understand the importance of port linked development in the country.

Tapping the potential of strategic location: The third phase, will focus on harnessing the strategic location of India's long coastline.

As part of the Sagarmala Programme, Gujarat as a State is the nearest port gateway to northern hinterland. Under the programme, 3 Coastal Economic Zones have been planned to be developed in Gujarat. The Ministry of Shipping is providing funding support for various projects in Gujarat. The Central Government will assist Gujarat to develop port-based service cluster in addition to the manufacturing cluster that has been planned. Gujarat has initiated numerous steps towards creating a service based

maritime cluster at the Gujarat International Finance Tec-City (GIFT) in Gandhinagar.

Gujarat is also contemplating on setting up a Maritime university, a centre of specialised maritime expertise as well as "the Cradle of Innovation" which shall meet the national as well as international need for skilled manpower. The proposed university will focus on the commercial side of the port sector, i.e. commercial shipping services (chartering, maritime finance, legal, insurance, underwriters, etc.). Research will also be a prime focus.

In this era of evolving preference for the usage of Clean Fuel, natural gas is increasingly becoming a preferred source of energy across the globe. Gujarat has all the infrastructure in place and has a huge potential to handle large volumes of LNG in future. Adding another feather to the nation's cap, Gujarat will also house the first of its kind Floating

Storage & Regasification Unit (FSRU) at Jafrabad, in addition to two new proposed LNG terminals.

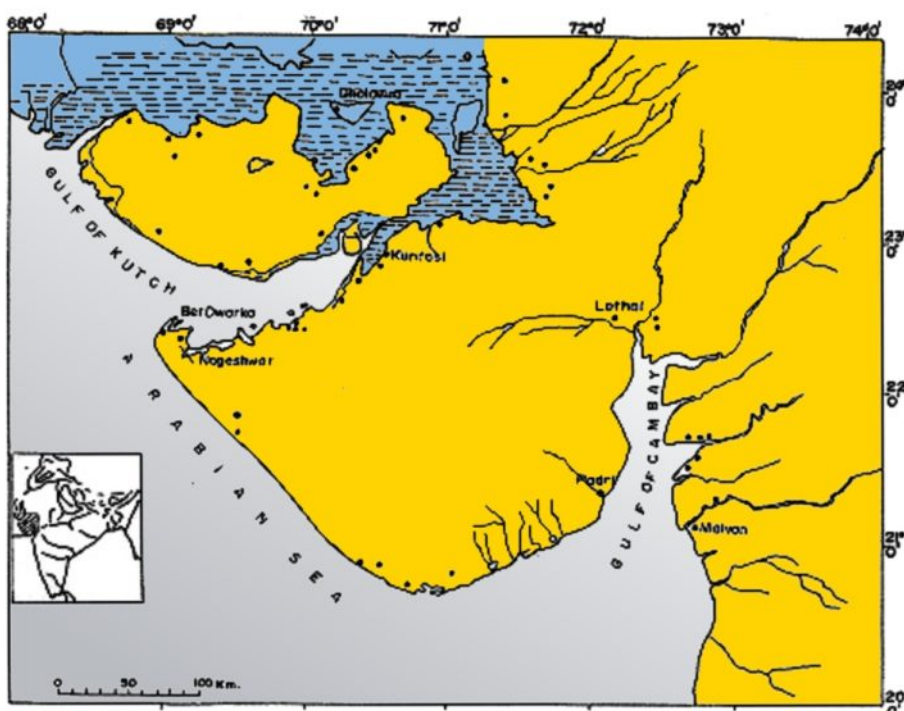
Gujarat has embarked on a pioneering initiative and is taking the lead in coastal shipping through its Ro-Pax and Ro-Ro facility which would decongest rail and road networks. The project between Ghogha and Dahej will significantly save time and cost of transportation of man and material from one place to another.

To offer a one-stop solution to GMB's information needs emanating from within and outside, GMB plans to implement Integrated Port Management System (IPMS). The system will centralize the architecture across all GMB ports in Gujarat and will track port level transactions. Once the system is implemented, all the activities shall be carried out online, enabling smooth functioning and better services to customers leading to the ease of doing business in maritime trade & commerce.

Courtesy GMB

Maritime Glory

The Land Locked Ports of Ancient Gujarat



Harappan & Late Harappan Coastal sites in Gujarat

Gujarat, the Western state of India has a very distinct coastline of approx. 1660 km. It is spread along the Arabian Sea, Gulf of Khambhat (Cambay) and Gulf of Kutchh. There is also the huge expanse of the Rann area towards the northern part of the state offering a very unique feature – the area remained under sea from about 9th BC to well into the AD time period and converted into a dry salt encrusted plain at other times.

The present day Gujarat has nearly 40 ports along its coastline, two large ports, 11 medium and remaining small. The numbers, however, were much larger in the ancient times owing to a relatively longer coast line of the region. The archeological and other historical details point towards 84 ports during the medieval period. Many of these ancient ports are physically "landlocked" today and it is very difficult to imagine them

as active, prosperous and commercial port cities. Several sites of Indus Valley Civilization, from the 3000–1500 BC period, in the Gujarat area, are within 20 km from the present shoreline. A few of them include Vallabhi, Gundi-Koliak, Hathab, Kathivadar, Sonrai, Rander, Vartej, Khakhrechi, Vavania, Kuntasi, Desalpur-Guntaligadh, Benap, Padan, Tharad, Mavsari, Bhadreswar, Rayan, Khari Rohar, Nagara, Modhera, Zinzuwada, Kodadha, Amarapur, Lothal, Padri, Bet Dwarka, and Kamboi.

Lothal, located at the head of the Gulf of Khambhat and believed to be the oldest dockyard in the world, is now situated about 23 km away from the shoreline, 12 m above the mean sea-level, on the left bank of river Bhogawa. Padri is also located in the Gulf of Khambhat, 60 km south of Bhavnagar port and just 1 km away from the shoreline. Dholavira is located in the Great Rann of Kutchh. Kuntasi, locally known as Bibino Timb, is 3 km south-east of the Kuntasi village and 5 km inland from the present shoreline. Malvan in south Gujarat was located on the banks of an oxbow lake formed by the Dumas branch of the Tapti River.

Maritime Glory

Site	District	Distance from from Shoreline (km)	Direction From from Shoreline	Elevation	Remarks
Lothal	Ahmedabad	26	North	12m	Dockyard
Padri	Bhavnagar	1	North	MSL	Centre of Salt Production
Kuntasi	Rajkot	5	South		jetty
Dholavira	Kutchh	1	East		Largest Site discovered
Shikarpur	Kutchh	3	North		
Bhagtrav	Bharuch	1.5	East	2m	
Nageswar	Jamnagar	4	East		Shell Industry Centre
Malvan	Bharuch	1	East	1.5m	Post Harappan Site

These locations are believed to be the ancient ports discovered and studied using Remote Sensing in addition to the historical literature and archaeological initiatives. The study of such landlocked ports is indeed highly fascinating subject to understand the maritime history of our country. It also provides deep insights regarding the receding shoreline in some of the coastal areas despite the general increase in sea levels being witnessed globally.

Carbon dating, morphological features and lithology have shown that the sea-level was nearly 2 to 6 meter higher than the present during mid-Holocene period. The Great Rann and Little Rann are unique examples of Holocene sedimentation. It is estimated that the Little Rann was about 4 m deep and thus

was inundated throughout the year. The advent of Holocene was marked by fluctuations of strandline and resulted in the two Ranns representing filled-up gulf and accumulation in an estuarine delta environment. It is also suggested that the Gulf of Khambhat and Gulf of Kutchh were connected during the early mid-Holocene period.

Archaeological evidences suggest that the behavior of shoreline was different at different places. Offshore currents are also responsible for depositing the sand in the Gulf, ultimately resulting in the shallowing of the Gulf and the river-generated sediments may have played a vital role in the seaward movement of the shoreline. There is evidence of an earthquake in Khadir Bet (Dholavira – phase III) of Rann of

Kutchh. Tectonic shifts may have added to the shifting of shorelines.

Periplus of Erythraean Seahas an extract translated as... "Beyond the river Sinthus there is another gulf, not navigable, running in towards the north, it is called Eirion; its parts are called separately the small gulf and the great; in both parts the water is shallow, with shifting sand-banks occurring continually and a great way from shore; so that often when the shore is not even in sight, ships run aground, and if they attempt to hold their course they are wrecked"....referring to the Rann area.

..... **Rajiv Gupta**

Secretary Interview - Reproduction

Mint News

22nd March, 2017

Working on port building, key Acts' revamp: Rajive Kumar

India is working on an ambitious Sagarmala programme to build ports along its 7,517 km. coast as well as a plan to operationalize 111 inland waterways. In an interview, Secretary in the Ministry of Shipping, Rajive Kumar, a 1981-batch Uttar Pradesh cadre Indian Administrative Service officer, talks about boosting cruise ship tourism, investment of Rs 8 trillion till 2035 under Sagarmala and updating the inland Vessels Act to address boat mishaps. Kumar also speaks about radio-frequency identification (RFID) technology and installing scanners at 12 major ports to improve ease of doing business. Edited excerpts:

What are your expectations from India's shipping sector in the next financial year?

In the last two and a half years, we have been working on a couple of major initiatives. One aspect of those initiatives actually relates to efficiency improvements at our ports and I'm happy to say that on all counts, our ports have had a turnaround. In most parameters, our ports were sinking till a couple of years ago. But now, in terms of profitability, turnover, efficiencies and facilitating the ease of doing business, most ports have shown tremendous progress.

The second part of our major initiatives has been the Sagarmala programme. It has been conceptualized as per the vision of the Prime Minister and its perspective plan is with us. And I'm happy to report that under it, projects worth Rs 1 lakh crore are in various stages of implementation. As you are aware, this perspective plan is till 2035, which overall envisages



RAJIVE KUMAR, IAS
Secretary, Ministry of Shipping

about Rs 8 lakh crore of investment through the four pillars of Sagarmala: port efficiency and capacity building, hinterland connectivity, port-led industrialization and coastal community development. We have a clear road map to move forward. We have also been able to create two vehicles - Indian Port Rail Co. for last mile port connectivity, and Sagarmala Development Co. - which are both functional and would, in the future, be the major vehicles for port development.

Part of our initiatives have to do with major acts in the shipping sector. So, two of the main acts that we have - Merchant Shipping Act and Major Ports Act - have been completely revamped to make them more efficient and are now before Parliament. Once these two acts are approved by Parliament and become law, they would add efficiencies to

our ports as well as streamline systems.

There are a couple of others we are in the final stages of (amending and overhauling) Inland Vessels Act to address boat tragedies. The new Inland Vessels Act would be like the MV (motor vehicles) Act, a central government Act, but (involves setting up) an authority like the RTO (Road Transport Office) under the state governments. Most non-mechanized boats are under the state governments' (purview). We wish to bring this Act up to date, as it will then help in the safe operation of boats. We expect it to be brought before the cabinet within a month.

What are the technology interventions that are being brought?

By 31 March, all our major ports will be using RFID technology for vehicles moving within the ports, which means, if a vehicle is coming to the port, all the information required about the vehicle for issuance of a gate pass is electronically available. This will help in reducing the time taken for such movement. Now, it takes around 20 minutes for all clearances, and around 15-20 minutes at check booths at ports. After RFID, it will take a minute or so. So, the movement of vehicles in ports will be much faster. This will initially happen in major ports, but all our non-major ports are also looking at it. Then, we are in the process of purchasing scanners for scanning containers. We'll place the order by this month and by end of December this year, all scanners will be in place. This will again help in faster movement of containers at major ports.

Through The Lens

INAUGURATION OF SAGARMALA DEVELOPMENT COMPANY

Shri Nitin Gadkari, Hon'ble Minister of Shipping, Road Transport & Highways inaugurated "Sagarmala Development Company" to take forward Prestigious Sagarmal Programme at New Delhi on 26th December, 2016. Also present was Shri Rajive Kumar IAS, Secretary, Ministry of Shipping, Govt. of India.



RELEASE OF NEWSLETTER SAGARMALA POST VOL. - I

Shri Nitin Gadkari, Hon'ble Minister of Shipping, Road Transport & Highways releasing "Sagarmala Post" Edition I, a Newsletter for Sagarmala at the Press Conference held on 26th December, 2016. Also present was Shri Rajive Kumar IAS, Secretary, Ministry of Shipping and Shri. Alok Srivastava, Addl. Secretary, Ministry of Shipping, Govt. of India

INAUGURATION OF SAGARMALA STALL AT VIBRANT GUJARAT

Shri Mansukh Mandaviya, Minister of State, Shipping, Road Transport & Highways and Chemical & Fertilizers, inaugurated the state-of-the-art exhibition display of Sagarmala, Ministry of Shipping at Vibrant Gujarat Global Investors Summit, 2017, on 10th January 2017.



JNPT-ANTWERP PORT TRAINING & CONSULTANCY FOUNDATION

(Mr. Alexander De Croo, Hon'ble Deputy Prime Minister of Belgium, Shri Sanjay Bhatia, Chairman, IPA, Shri Ravindra Agrawal, Joint Secretary (Sagarmala), Ministry of Shipping, Shri Neeraj Bansal, Chairman In-charge, Jawaharlal Nehru Port Trust and other dignitaries at the inauguration of the training centre)

FIRST MEETING OF THE STATE LEVEL SAGARMALA COMMITTEE MEETING AT VIJAYWADA, ANDHRA PRADESH

The first State Level Sagarmala Committee meeting was held on 08th February-2017 at Vijayawada, Andhra Pradesh. The meeting was chaired by Hon'ble Chief Minister, Andhra Pradesh. The Ministry of Shipping, Govt. of India was represented by Shri Rabindra Aggarwal, IAS, Joint Secretary, Sagarmala



SAGARMALA POST

(A Newsletter on Sagarmala Programme by Ministry of Shipping)