



THE

SAGARMALA

POST

March-April, 2018



Karnataka: Success Stories



Shri Gadkari's South Korea Visit 06



Events Detour 12



A Port That's Older Than History 23

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From the SECRETARY'S

DESK



For the last three years, the Sagarmala Programme has been changing the face of India's shipping, bringing about an infrastructural transformation, inducting newer innovations, and exploring untapped prospects and possibilities – in a quest to build shipping into 'the engine of growth' for the economy.

As the programme assumes new magnitude and dimensions, it would be worthwhile to share in this edition some recent developments and happenings.

Karnataka is the state in focus for this edition. NMPT has been ranked No.1 among 12 Major Ports for Swachh Bharat Mission 2017-18 by the Quality Council of India. Another feather in its cap is that it is the first port in India to have gone completely green. Besides, with its initiative in solar energy, it has become totally independent in terms of traditional sources of power. This issue also traces the glorious history of the Mangalore Port, which is one of the oldest ports in India's maritime history.

India's active involvement in the extension of the Chabahar Port Phase-I has opened a new chapter in the relationship between the two nations, paving the way for bilateral ties and cooperation in many areas. On 17 February 2018, India and Iran signed several bilateral agreements. The two countries recognized the unique role of Iran and India in promoting multi-modal connectivity within and across the region.

This issue covers the geo-political significance of Shri Nitin Gadkari's visit to the Republic of Korea. The four-day visit was marked with a spate of

events, during which an important agreement was inked – opening a new phase of symbiotic relationship in the areas of shipping, ports, inland waterways, highways, river interlinking and infrastructure.

The above two major events make the lead stories in the 'Spotlight' section – a regular feature that highlights major happenings, initiatives and developments in various spheres of India's maritime sector.

It gives me a sense of pride to share the news that JNPT and Paradip Port Trust came out with stellar performances during the FY 2017-18. JNPT touched a record volume of handling 4.83 million TEUs. On the other hand, the Paradip Port Trust has displayed a feat of handling an all-time record cargo of 102 million tonnes and joined the 'Exclusive Club of Ports'.

To provide an additional access route to Nepal, a historic decision has been taken by India and Nepal to develop inland waterways for the movement of cargo between the two countries. IWAI has engaged a private operator for undertaking the operation and maintenance of its IWT terminals at Kolkata and Patna.

Every time the Sagarmala Post comes out, it brings excitement with it. And that also makes us look forward to your feedback. Your feedback about the content of the newsletter, as about Sagarmala programme, is important to us.

GOPAL KRISHNA, IAS
Secretary, Ministry of Shipping

NMPT: WRITING NEW SUCCESS STORIES

Managing and operating one of India's Major Ports, the New Mangalore Port Trust has ever been writing success stories in maritime operations. It has been tapping new possibilities to scale higher levels of operational efficiency by creating world-class facilities, inducting state-of-the-art technologies and stimulating a work culture that's customer-friendly. The initiatives have been reflecting in the port's volume of the cargo handling and the traffic of vessels. The year 2017-18 has been marked with hectic activities, when many significant measures were taken and many new success stories written.

TOUCHING NEW GOALS IN CONTAINER TRAFFIC

During the financial year 2017-18, the port achieved a record handling of 1,15,498 TEUs (twenty-foot equivalent units) as against 94,929 TEUs in the previous year, registering an year-on-year growth of 21.67%. The growth marks a highpoint in the gradual rise in container cargo movement. The share of container cargo in total traffic was almost nil till the year 2000. In 2000-01, the port handled 1,891 TEUs of containers, making a beginning in the container handling segment. The pace gained momentum and the number of containers handled at the port has steadily increased over the years. Today, the port has a significant share in the country's trans-shipment container handling.

Now, the new Mangalore Port has emerged as the largest coffee exporting port in India. During the current year 2017-18, a record quantity of 2.41 lakh tonnes (12,249 TEUs) of coffee was exported as against 2.36 lakh tonnes (12,200 TEUs) in 2016-17.



Cruise ship AIDA Bella at NMPT

This remarkable growth in container traffic is due to the proactive efforts by the port management in interacting with the trade and upgrading the infrastructure for the smooth handling of containers. The port has constructed additional container stack yards, procured reach stackers and mobile cranes and concretized roads. Besides the infrastructural development, the exporters are permitted to use the godowns for storing of their export cargo. Other initiatives such as easy documentation, concessional rates, improved road connectivity and increase in the frequency of vessels call have contributed to the growing preference for NMPT by importers and exporters.

AN ACCENTUATED EMPHASIS ON SOLAR ENERGY

The NMPT continues to show its commitment to environmental concern. The port authority has initiated various projects for generating solar power by commissioning solar power plants and roof-top solar panels

at various locations at the port. Under the initiative, a 4-MW solar power plant was commissioned in the port area in addition to solar panels installed on the roof of administrative office building (250 Kw), hospital building (50 Kw), guest house building (50 Kw) and storage sheds (840 Kw). So far, 5.19 MW capacity of solar power has been commissioned by the port, which will meet 95% of the power requirement of 74,73,600 units of electricity. It will save Rs.6,45,71,904 per annum in the electricity bill. Further, this will cut down around 6,816 tonnes of emission of carbon dioxide.

WORKING TOWARDS THE REALITY OF A 'GREEN PORT'

The port has taken up Green Port Initiatives such as planting tree saplings and maintains 33% of the port area as the green belt. In addition to that, the port is taking care of controlling the dust and pollution. Rain water harvesting, sewage treatment and sloop reception facilities are new initiatives by the government.

The initiatives of the port authority have been applauded and recognized with various awards.

For the last 5 years in a row, the port has bagged Greentech Environment Award in the Gold Category for the Port Sector. Karnataka State Pollution Control Board and the District Administration have also recognized NMPT's endeavours in keeping the area clean and green.

For its initiatives under the Swachh Bharat Mission, NMPT has been recently ranked No.1 position among the country's 12 Major Ports by a jury of independent consultants appointed by the Ministry of Shipping.

'EASE OF DOING BUSINESS': FROM IDEA TO IMPLEMENTATION

In line with the Government of India's policy on 'Ease of Doing Business', the port has taken up and implemented a number of initiatives that have led to better business conditions for the customers.

- **Web-based Port Clearance System:** NMPT has gone live with 'Web-based Port Entry/Clearance System' which is a major milestone achieved in the initiative of 'Ease of Doing Business'. Steamer agents are now able to generate and download both inward and outward clearance certificates without any manual intervention.
- **Electronic Delivery Order (eDO):** NMPT has introduced eDO (Electronic Delivery Order) facility for its users and thereby become the first port in India to introduce eDO for bulk and liquid cargos. This facility allows vessel agents to issue eDO through the electronic medium. The introduction of eDO is in line with the Centre's policy on 'Ease of Doing Business'.
- **External Web Access for downloading invoices:** All invoices related to the port and dock can

now be downloaded through internet by clients.

- **Technology powered by Oracle:** The IPOMIS system was implemented in NMPT using Oracle technology, namely Oracle e-Business Suite.
- **Port Community System:** The IPOMIS system has been successfully integrated with the POS application of NMPT for sharing information related to trade and EDI data from the custom's ICEGATE.
- **RFID System:** Pass issuance system has gone live in NMPT, successfully powered by RFID technology.
- **E-visa:** NMPT is the first port to introduce the e-visa facility for cruise passengers.
- **Estate Payments via PCS:** NMPT has successfully integrated Estate module in ERP system to process all Estate payments through PCS.

SHIFTING THE MARKS HIGHER, MAKING NEW RECORDS

- NMPT has crossed 42 million tonnes of traffic during the financial year 2017-18 and thereby achieved the highest ever traffic handled by the port.
- A growth of 22% in the coastal cargo movement during the year.
- Record quantity of 22.09 lakh tonnes of LPG handled during the year.
- Record quantity of 7.92 lakh tonnes of edible oil handled.
- Import of river sand started through the port during the year which will contribute to the ecological balance and also stop illegal sand mining in the rivers.

KEEPING UP WITH THE TIME AND TECHNOLOGY

NMPT has taken several steps for modernization and upgradation of the infrastructure:

- State-of-the-art Vessel Traffic

Management System (VTMS) for providing safe navigation facilities for vessels calling at the port. The work is nearing completion.

- Sewage Treatment Plant (STP) for recycling and re-use of the waste water for optimum utilization of the sewage generated by the port. The work has been completed.
- All the port roads are concretized to ensure smooth movement of the road-bound traffic within the port area, which will also reduce the manufacturing cost for next 25 years.
- To provide adequate storage facility, both covered and open, the port has recently added 4 covered sheds inside the port and added additional container stack yards. The work of additional 2 storage sheds is in progress. In addition, 30 acres of the land inside the port is being converted as a stackyard for the storage of Ro-Ro cargo vessels. The work is nearing completion.
- Mechanization of bulk cargo handling facilities has been initiated at the newly constructed berth (No.18) with environment safety measures for handling coal. ■



CONSTRUCTION OF FISHING HARBOUR AT KULAI

Ministry of Shipping has sanctioned the construction of a fishing harbour at Kulai by funding 95% of the project cost to meet the long pending demand of local fishermen and enforce security in the New Mangalore Port area.

With the development of New Mangalore Port in 1975, there were consistent and continuous demands from local fishermen for the construction of a fishing jetty at the port. Since then, the port authority has been working in various ways to meet their need. During the rainy season, the fishermen take shelter inside the port premises. While that affects the smooth operation of the port, that also poses security risk and creates hindrance in developing port infrastructure in the spending beach.

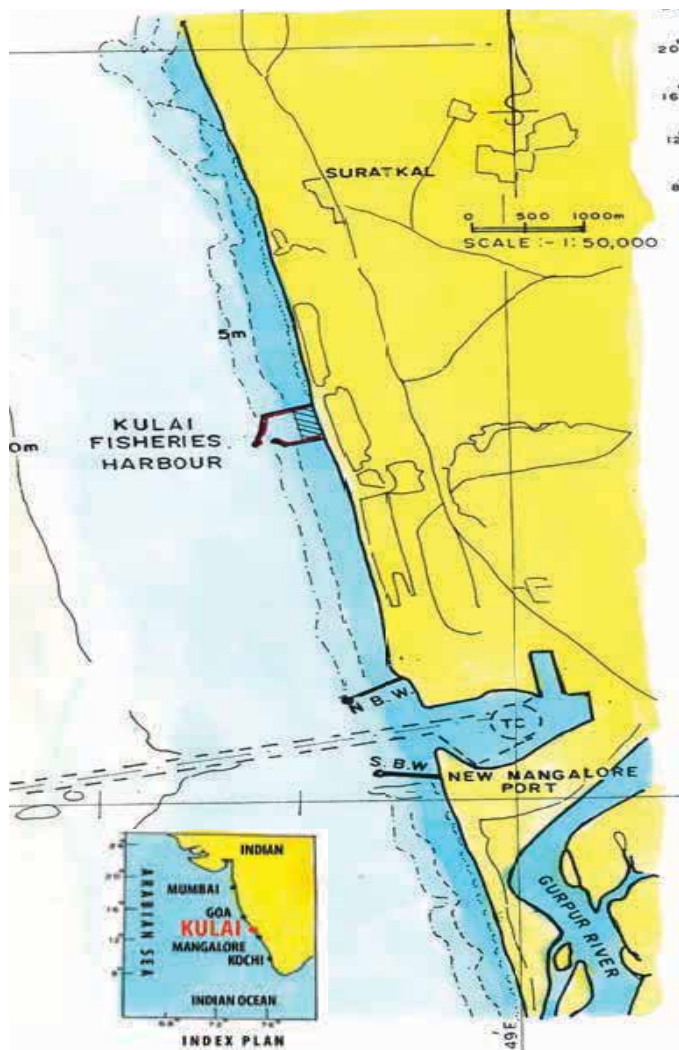
In a major stride towards that, New Mangalore Port Trust (NMPT) and the Government of Karnataka have initiated the process to build a fishing harbour at Kulai near New Mangalore Port. Oceanographic and model studies were carried out by Central Water & Power Research Station (CWPRS). Based on the inputs of CWPRS, a detailed project report was prepared by Coastal Engineering for Fisheries (CICEF) in January 2014 in consultation with the Government of Karnataka and NMPT. The DPR was further revised in December 2015 and February 2017.

A MAJOR LANDMARK IN COASTAL COMMUNITY DEVELOPMENT

A major decision regarding the development of Kulai fishing harbour was taken during last Maritime States Development Council (MSDC) meeting held in Goa in 2015. The development of fishing harbour at Kulai was considered as one of the early bird projects under the Sagarmala Programme with sharing of cost of the project among Department of Animal Husbandry, Dairying & Fisheries (DADF) (40%), MoS (30%) and NMPT (30%). The land for the project was agreed to be provided by the State Government of Karnataka.

In the meantime, DADF, Ministry of Agriculture and Farmers' Welfare has revised its scheme under which maximum 50% of Central Government grant can be given to a fishing harbour project and remaining 50% is to be borne by the State Government. It has also been decided by DADF and MoS that the Fishing Harbour projects can be taken up for implementation in a convergence mode by sharing the 50% Central Government share equally between the CSS on Blue Revolution: Integrated Development and Management of Fisheries of DADF and Sagarmala Programme of the MoS. However, considering the special nature of the project 'Construction of Fishing Harbour at Kulai' and its linkage with NMPT, Ministry of Shipping decided that project cost of Rs. 196.51 crore will be borne by MoS, NMPT and GoK with their shares of 50%, 45% and 5% respectively.

The project has been appraised and approved by the Project Sanctioning Committee (PSC) of the DADF. The project was



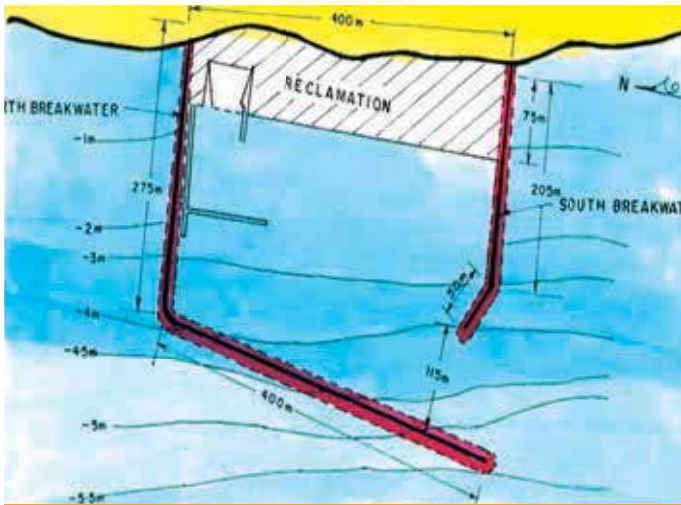
Proposed site for Fisheries Harbour at Kulai, near New Mangalore Port

A FISHING HARBOUR WITH STATE-OF-THE-ART FACILITIES

The project will be built with modern fishing facilities. The waterside facility will include quay and jetty structure, dredging of harbour basin, rock bund (breakwater) and navigational aids. The dredged level of the harbour is proposed at -3.0 m which gives a depth of 3.26 m at MLLW. This provides a clearance of 0.61m for 18m boat having a draft of 2.65m.

The landside facility will be more comprehensive. The infrastructure will include land reclamation with dredged and burrowed material, internal fresh water storage, supply and distribution, drainage and sewage, storm water drains including waste water treatment system, electric power and lighting. There will be an elaborate facility for sea water pumping and distribution system for cleaning of fish, fish handling and loading facility, auction hall, fishermen gear sheds, sheltered net mending shed, net drying areas, boat repair shop and boat parking. The harbour will be equipped with ample parking for vehicles and a restaurant. It will be designed with a compound wall to secure the harbour complex from intruders.

Once the fishing harbour is built, it will help in realizing a dream long-cherished by fishermen, giving them a new security about livelihood and a new optimism about life. It will also help in decongesting the port during the rainy season and expanding port facilities in future. ■



Final Layout recommended by CWPRS for fishing harbour at Kulai, Karnataka

finally approved by the government on 23 March 2018 and the work is to commence within two month from the date of approval. The New Mangalore Port has been given responsibility to work as the nodal agency for execution of the project. The port will take up the works immediately and complete in all respect within the scheduled time. After completion, the project is to be handed over to Karnataka Government for operation and management. It is expected that the project will be completed within four years. The fish handling capacity of the project will be of 27,100 MTPA.

The project site is located near the government ice factory at Kulai village, Mangalore, Dakshina Kannada District, Karnataka at a latitude 120 57'44.68" and longitude 740 48'20.10".



A fishing trawler

SHRI GADKARI'S VISIT TO SOUTH KOREA: OPENING OF NEW AVENUES

Shri Gadkari's visit to Republic of Korea marks a new phase of bilateral cooperation in the spheres of shipping, ports, inland waterways and river interlinking.

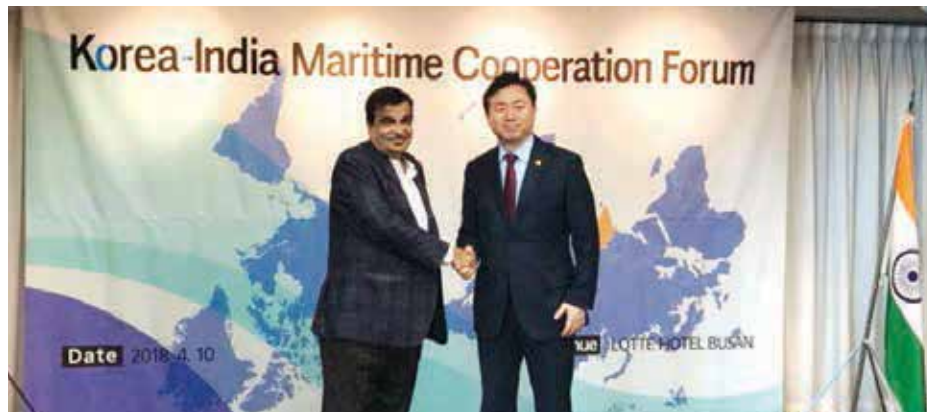
The trade and economic relations between India and the Republic of Korea have gathered momentum in the recent years, with bilateral trade and cooperation reaching a new high.

The two countries have a bilateral cooperation in many important areas, including shipping.

India and Korea have an institutional framework for cooperation through the memorandum of understanding (MoU) for cooperation and mutual assistance to facilitate development of ports, port-related industries and maritime relationship. Known for maritime technology prowess, the Republic of Korea had partnered with the Ministry of Shipping in the Maritime India Summit held in Mumbai during April, 2016.

In a bid to take the bilateral cooperation further, Shri Nitin Gadkari, Union Minister of Shipping, Road Transport & Highways and Water Resources, River Development & Ganga Rejuvenation, undertook a four-day visit to the Republic, between 9 and 12 April, 2018.

The visit was charted with the specific objective of strengthening ties between the two nations and further cementing cooperation in various areas, including sharing of technology, experience in port development and operation and joint participation in port-related construction, building and engineering projects of mutual interest.



Shri Nitin Gadkari with Shri Kim Young-Choon, Minister of Ocean & Fisheries, Republic of Korea

Inland waterways, highways, river interlinking and infrastructure sectors were also part of the framework for discussions.

“We are looking to have partnership in the field of ship-building, smart transportation system, water conservation and recycling, eco-friendly energy system for marine industries and technology to develop our rivers to drive economic growth.”
– Shri Nitin Gadkari

The four days of Shri Gadkari's visit marked a spate of high-level bilateral discussions and inking of an important agreement between the two countries.

OPENING UP EMPLOYMENT FOR SEAFARERS

India signed an MoU with the Republic of Korea on Mutual Recognition of Certificates of Competency of Seafarers. This paves the way for the two governments to mutually recognize the certificates of maritime education and training, competency, endorsements and medical fitness of seafarers issued by each other. The agreement was signed by Shri Nitin Gadkari and his Korean counterpart Kim Young-Choon at a ceremony in Seoul.

Speaking on the occasion, Shri Gadkari said that the signing of the agreement will benefit both the countries. Korea is a large ship-owning nation. As of now, the Korean entities own more than 500 foreign-going ships and need seafarers to work on their fleet. India has a large number of seafarers – as many as 1,54,349. The agreement will open up

employment opportunities for Indian seafarers on Korean ships.

BLAZING NEW TRAILS TOGETHER IN INFRASTRUCTURE

Deliberating on the crucial significance of infrastructure as the driver of growth and the scope of India-South Korea cooperation in the area, Shri Nitin Gadkari addressed the delegates of the Korea-India Infrastructure Cooperation Forum in Seoul. Leading members from the infrastructure business of both the countries participated and exchanged views on the potential for doing business for mutual benefit.

Speaking on the occasion, Shri Gadkari said that India has plans to construct 12 expressways with an investment of over Rs. 1 lakh crore. This, he said, would present huge opportunities for Korean businesses. Similarly developing the national waterways for commercial navigation in India, and the plans to develop shipbuilding, fisheries and the port sector will also create investment opportunities, he said. Shri Gadkari also conveyed the Indian Government's commitment to facilitating all foreign businesses which wished to invest in India.

A SYMBIOTIC RELATIONSHIP IN CRUCIAL AREAS

During the visit, Shri Gadkari focussed on taking forward the bilateral cooperation between India and Korea in the spheres of shipping, ports, inland waterways, highways, river interlinking and infrastructure.

He visited Busan Port, one of the major ports of the Republic of Korea. In course of exploring new prospects of collaboration in shipping and ports, he held a bilateral meeting with the South Korean Oceans Minister, Kim Young-Choon. The union minister also addressed the India-Korea Maritime Cooperation Forum.

Shri Gadkari met the leading members of the Korean Financial Sector to explore ways of greater RoK involvement in financing interlinking of rivers, highway construction, developing logistics parks and shipbuilding activity in India. An important part of the cooperation would be interaction and exchange of ideas among experts from both sides. Indian highway engineers and shipbuilding engineers can be trained

at specialized training institutions of the Republic of Korea to expose them to the systems in place there. Korean companies expressed keenness to work on the Nagpur-Mumbai expressway project.

Shri Gadkari also met the Korean Minister for Land and Infrastructure (MOLIT), Ms. Kim Mee Hyun in Seoul. The two Ministers discussed the prospects of cooperation in developing smart highways. Ms. Hyun said that RoK is committed to enhance cooperation based on the commitments made during the visit of PM Modi in 2015.

In another meeting with the RoK Minister for Environment, Ms. Kim Eungyung, Shri Gadkari discussed the scope and prospect of bilateral cooperation in the area of river cleaning and rejuvenation.

While Shri Gadkari's visit to the Republic of Korea has strengthened the relationship between the two countries, indicating that South Korea is an important ally in the Indian foreign policy matrix, it opens an entire new chapter in bilateral cooperation between the two countries which have a major presence in the world maritime sector. ■



Deliberation to explore new prospects: Shri Nitin Gadkari in a meeting with the Minister of Ocean & Fisheries, RoK

INDIA AND IRAN: HARBOURING A RENEWED RELATIONSHIP

With India's partnership in Iran's new harbour at Chabahar, the two countries are now up for bilateral ties in many areas.



Bilateral meeting between Hon'ble PM, Shri Narendra Modi and Hon'ble Iranian President Dr. Hassan Rouhani in New Delhi

India and Iran signed nine bilateral agreements on 17 February 2018. The two countries also signed a historic number of MoUs. Since India's participation in the extension of the Chabahar Port Phase-I, the relationship between the two countries has come to a new mark, paving the way for bilateral ties and cooperation in many areas.

Iranian President H.E. Dr. Hassan Rouhani arrived in New Delhi and was greeted at the Rashtrapati Bhavan by Hon'ble President, Shri Ram Nath Kovind and Hon'ble Prime Minister, Shri Narendra Modi. "Both Iran and India respect each other. Under your excellency, India-Iran ties have strengthened," Shri Modi said at a joint statement while welcoming the Iranian president. Praising Dr. Rouhani's vision for giving access for trade with Afghanistan through Iran's Chabahar Port, Shri Modi said, "We want to enhance connectivity. I thank you for helping develop Chabahar Port."

"Relations between India and Iran are far beyond trade and diplomacy. Our relations are historical, civilizational," Dr. Rouhani said. "India has strategic relations, especially for transit and energy," he added. Dr. Rouhani asserted that both the countries were determined to combat terrorism and extremism, adding that regional conflicts must be resolved through diplomacy and political initiatives. Dr. Rouhani also hailed the success of the Chabahar Port and hoped for successful bilateral ties between India and Iran.

CHABAHAR: INDIA'S GEO-POLITICAL TRIUMPH

The Chabahar Port Phase-I which was inaugurated by Iran's President Dr. Hassan Rouhani on 3 December 2018 marks an important milestone in India-Iran relations as well as Afghanistan-India resolve to look for a viable transit corridor to landlocked Afghanistan, bypassing Pakistan.

Located in the Gulf of Oman along the Makran coast, in the Iranian province of Sistan-Baluchistan, just 75 km from the China-built and operated Gwadar port in Baluchistan province of Pakistan, Chabahar at a distance of 550 nautical miles from Kandla port and about 786 nautical miles from JNPT, has assumed a vital significance for India's trade and commerce with Afghanistan and the countries beyond. The Chabahar port is India's gateway to Afghanistan and the regions beyond, including Central Asia, Russia, and further to Europe. It will also provide India a direct access to its Farkhor airbase in Tajikistan. India's partnership in the development of the Chabahar port signifies India's geo-political triumph.

OPENING NEW AREAS OF TOGETHERNESS

The two countries recognized the unique role of Iran and India in promoting multi-modal connectivity within and across the region. The ratification of the Trilateral Transit

Agreement between India, Iran and Afghanistan on the Establishment of International Transport and Transit Corridor by all sides and the recent successful shipment of wheat assistance from India to Afghanistan through Chabahar Port have opened a new gateway to and from Afghanistan, Central Asia and beyond.

With a view to fully utilize the potential of the Chabahar Port and its connectivity to Afghanistan and Central Asia, India conveyed its readiness to support the development of Chabahar- Zahedan rail line. The two countries also reiterated their commitment to International North-South Transport Corridor (INSTC) and stressed on the need for the inclusion of Chabahar within its framework.

"Both Iran and India respect each other. Under your excellency, India-Iran ties have strengthened."

– Prime Minister, Shri Narendra Modi at India-Iran Meet

India seeks a greater participation for its public and private sector enterprise in the Chabahar free trade-industrial zone. Iran expressed its readiness to create an even better

environment for the investment and welcome the Indian enterprise to set up plants in sectors such as fertilizers, petrochemicals and metallurgy in Chabahar FTZ on terms mutually beneficial to the concerned parties.

In the sphere of maritime, both the countries expressed interest in enhancing cooperation. It was agreed to hold a dialogue to look into measures for cooperation in the sphere of defence, including port calls by naval ships, training and regular exchanges of defence delegations.

The two countries reiterated bilateral cooperation in a number of other areas, including higher education, science and technology, agriculture, labour and entrepreneurship and tourism through regular interaction and institutional mechanisms, and directed relevant authorities to work out further details.

One of the high points of the meet was the release of a joint postage stamp depicting Deendayal Port, Kandla and Shahid Beheshti Port, Chabahar.

India's engagement in the development of Chabahar port has given a whole new turn to Indo-Iran relationship and it has brought the two countries together to realize common dreams. ■



Synergy of strengths: Shri Narendra Modi and Dr. Hassan Rouhani issuing a historical joint declaration

JNPT SETS ANOTHER RECORD IN CONTAINER VOLUME

India's busiest container gateway, JNPT handled a record 4.83 million TEUs in 2017-2018, up 7.3%.

Jawaharlal Nehru Port Trust (JNPT) ended the financial year 2017-2018 with record volumes, handling 4.83 million twenty foot equivalent units (TEUs), a year-over-year growth of 7.3%. The growth in volumes was led by APM Terminals-operated Gateway Terminals India, whose yearly traffic surged 13% YOY to 2.03 million TEUs.

JNPT, which handled a record 4.5 million TEUs in the previous financial year, has sustained its momentum in the current financial year as well. Recently the port has implemented various ease-of-doing-business initiatives for reduction in transaction cost and time for the trade.

Among the four terminals under JNPT, Gateway Terminals India Pvt. Ltd. (GTIPL) emerged as the top terminal yet again by handling 2.03 million TEUs, up from the 1.79 million TEUs it handled in FY17. This is the third time GTIPL has crossed the 2 million TEU mark in a year since FY14 despite a steep rate cut of 44.28 per cent ordered by the Tariff Authority for Major Ports (TAMP) in January 2012.

Touching new levels of excellence

Financial Year	Container Volume	Increase (YOY)
2016-17	4.5 million TEUs	0.2%*
2017-18	4.83 million TEUs	7.3%

*As compared to FYI 15-16

DP World Nhava Sheva-controlled Nhava Sheva India Gateway Terminal (NSIGT) saw volumes surge 48% YOY to 659,400 TEUs as compared to 445,111 TEUs in FY-2017. New concessionaire BMCT, which opened full-fledged operations in early February this year, loaded and discharged 23,212 TEUs in its first two months.

TOMORROW'S 'GATEWAY PORT' OF SOUTH ASIA

JNPT is on a major expansion drive to become one of the top 10 ports in the world. The port authorities are foraying ahead to make JNPT the 'Gateway Port' of the South Asia and the most preferred port in terms of facilities, economy and ease. From big investment plans to creating mega terminals to developing innovative ports and progressing international forays, JNPT has been building its capabilities to sail ahead on higher tides. The implementation of 'Ease of Doing Business' initiatives – which are focused towards reduction in documentation, time and cost, and ultimately help the trade – have not only provided a business-friendly environment to the stakeholders but also improved individual terminal operational capacities.

It is envisaged that the port will be able to handle at least one million TEUs more in FY-2019 with the addition of much-needed capacity. The long-term perspective aims at 10 Million TEUs by 2022. ■



A panoramic view of the bustling Jawaharlal Nehru Port

PARADIP PORT TRUST JOINS THE 'EXCLUSIVE CLUB OF PORTS'

PPT has displayed a feat of handling an all-time record cargo of 102 million tonnes.

Displaying a high degree of excellence in operations, the Paradip Port Trust has handled an all-time record cargo of 102 million tonnes during the financial year 2017-2018 as against 88.95 tonnes in the previous year, achieving a growth of 14.7 per cent. With this feat, it has joined the 'Exclusive Club of Ports' – a recognition for the ports in India which have touched or exceeded the mark of 100 tonnes of cargo in a fiscal year.

Reflecting the upbeat mood, Shri Rinkesh Roy, Chairman, PPT, said that the port owed its success to the stakeholders and the support of the Ministry of Shipping. "The growth saga is a part of the conscious strategy under the Sagarmala Programme of the Ministry of Shipping. The Port has clocked a remarkable 50% growth within last 5 years, as the cargo through-put stood at 68 MT in FY 2013-14", he said. Shri Roy looked up at even much higher goals and called upon all the stakeholders to put in their energy towards making Paradip Port the No. 1 Port in India in cargo handling in the next financial year.

Setting new measures of performance

Financial Year	Cargo Volume	Increase (YOY)
2016-17	88.95 MT	14.1%*
2017-18	102 MT	14.7%

*As compared to FY 15-16 (76.37MT)

The port has displayed a remarkable performance in many other areas of operations. A record traffic of 10.18 MT of cargo was handled during January this year against the previous record of 9.42 MT achieved in December, 2017. The ship berth-day output of 24,814 MT has been achieved as against 23,727 MT



An aerial view of Paradip Port

in the previous year, reflecting a growth of 4.85 per cent. The port has taken up initiatives under the Sagarmala programme to promote coastal shipping of finished fertiliser. Around 50,192 tonne of DAP has been shipped from Paradip by 10 container vessels, replacing the earlier mode of transport which used to be either rail or road.

While the recent performance has taken the Paradip Port to a new realm of operational excellence, the port has already many feathers in its cap.

- Largest port in the country in

terms of rated capacity @ 277 MTPA.

- Largest dry bulk handling port.
- Largest coal handling port.
- Largest coastal cargo handling port.
- Second largest Major Port in terms of traffic handled @ 102 MTPA in 2017-18.
- Competitive marine charges.
- A record quantity of 5,12,467 MT of cargo handled in a single day on 25/11/2017.
- Largest railway terminal in the country in terms of rakes handled. ■



INDIA'S LARGEST CONTAINER TERMINAL COMES UP AT JNPT

The Phase-I of Rs. 7,915-crore container terminal at JNPT opens a whole new chapter in logistics for India's international trade.

As India's international trade is assuming new dimensions with globalization, the need for more logistics and infrastructure facilities has become very significant. Optimizing the efficiency of the movement of containers is critical to the growth of EXIM trade. The 4th Container Terminal at JNPT is part of an evolving answer to that need. Designed at an outlay of Rs. 7,915-crore with the facilities that measures up to the finest in the world, the terminal will provide the much sought-after facilities for international trade.

The project of the fourth terminal seeks to double JNPT's capacity to nearly 10 million standard container units and will make it the 33rd biggest port globally. Presently, JNPT has a capacity of 5.3 million standard container units capacity and with the coming up of Phase-I, 2.4 million standard container units are added. On the completion of the Phase-II by 2022, another 2.4 million standard container units will be added to the capacity.

The Phase-I of the 4th Container Terminal which was built at a cost of Rs. 4,719 crore, was inaugurated by Prime Minister Shri Narendra Modi on 18 February, 2018. "If we have to carve out a place for ourselves in a globalized world, we need to

The world's 33rd biggest port in the making

Present Capacity	5.3 million standard container units
Capacity addition in Phase-I	2.4 million standard container units
Capacity addition in Phase-II	2.4 million standard container units
Total capacity by year 2022	10.1 million standard container units

enhance our waterways," Prime Minister said while dedicating the terminal to the nation.

Present at the event, Shri Nitin Gadkari, Minister of Shipping, Road Transport & Highway and Water Resources, River Development and Ganga Rejuvenation, spoke about the on-time completion of the project. "As committed by Hon'ble Prime Minister, Shri Narendra Modi, the First Phase of the Terminal is ready in a record time", he said, reiterating that



Hon'ble Prime Minister, Shri Narendra Modi inaugurating the 4th Container Terminal at JNPT

“Logistics play a key role in the development of the economy and the government is committed to provide world-class logistics and infrastructure facilities, so that trade flourishes”.

The Terminal has been developed on the concept of ‘Design, Build, Fund, Operate and Transfer (DBFOT)’ for a concession period of 30 years. The foundation stone for the project was laid by Prime Minister, Shri Narendra Modi in October, 2015.

The terminal will have the deepest berths, enabling it to handle ‘Mother Ships’. It will be able to handle the biggest container ships from a quay length of 1 km and cranes that can reach 22 rows wide or greater. It will be able to handle three container ships at one go with a sufficient yard space.

The terminal will be linked to the dedicated rail freight corridor and will be able to receive about 350 containers per rake. The rail facilities will be the largest in India with the only on-dock Dedicated Freight Corridor (DFC) compliant facility in India, capable of handling 1.5 km-long, 360 Twenty-foot Equivalent Unit (TEU) container trains after the completion of the DFC. The facility will also have provision for storing 1,600 reefer (refrigerated) containers to handle agricultural and horticulture produce. Thus, the commencement of operations at the 4th terminal offers a great opportunity for the export-import sector to avail of the new facilities.

The development of world-class infrastructure to boost international trade and give impetus to ‘Make in India’ programme has been among the key focus areas of the government. In this direction, JNPT is making major strides to be future-ready and contribute to Government of India’s vision of port-led development under Sagarmala Programme.

World-class facilities, futuristic perspective

- **Deepest berth capacity:** Capacity to handle ‘Mother Ships’
- **Largest cranes:** 22 row wide cranes capable of handling largest container vessels
- **1-km quay/90-Ha:** Capable of handling 3 container ships at one go with a sufficient yard space
- **Dedicated road access:** Exclusive road access for faster movement – without any hurdles
- **On-dock Dedicated Freight Corridor (DFC):** The rail facilities will be the largest in India with the only on-dock Dedicated Freight Corridor (DFC) compliant facility in India, capable of handling 1.5 km long, 360 Twenty-foot Equivalent Unit (TEU) container trains on completion of the DFC

A blueprint for 101 projects in Maharashtra, costing Rs. 2.5 lakh crore, has been chalked out under the programme. Out of that, 5 projects have already been completed and 58 are under various stages of development.

The opening of the Phase-I of the 4th Container Terminal is the opening of a whole new chapter in India’s logistics and global trade. ■



A perspective view of the container yard JNPT

INTERMODAL TERMINAL TO COME UP AT GHAZIPUR (UP)

Another stride towards providing an environment-friendly, fuel-efficient and cost-effective mode of transport.

An Intermodal Terminal has just gone from the blueprint to the ground at Ghazipur (Uttar Pradesh). Designed at a cost of Rs. 155 crore, it will link the National Waterway-1 (River Ganga) to National Highway-31, connecting Ghazipur to Patna, and offer options for road and waterway transportation.

Part of the efforts to promote an environment-friendly mode of transport, the terminal is being constructed by Inland Waterways Authority of India (IWA) under the World Bank-aided Jal Marg Vikas Project on the National Waterway-I. The foundation stone for the terminal was laid by Hon'ble Minister of Road Transport and Highways and Shipping, Shri Nitin Gadkari on 25 January, 2018.

The terminal will have facilities like berths, storage areas and sheds, terminal building, communications systems and electrical substation. It will have a handling capacity of 12 lakh tonnes per annum. With a view to promote an environment-friendly mode of transport, an LNG bunkering facility is also being planned at the terminal. The construction of the terminal is expected to be completed by April 2020.

The intermodal terminal is one of the several sub-projects under the Rs. 5,369 crore Jal Marg Vikas Project, which aims at augmenting the navigational capacity of NW-1 from Varanasi to Haldia. The other sub-projects include the construction of three multi-modal

terminals at Varanasi, Sahibganj and Haldia; a new navigational lock at Farakka; bank protection works; river navigation system; construction of Ro-Ro terminals and another intermodal terminal at Kalughat.

The Ghazipur intermodal terminal promises benefits of crucial importance in the sphere of cargo transport. It will help reduce transportation cost by enabling cargo movement on the river and providing linkage with the hinterland. It will ensure efficient and economic intermodal supply chains throughout U.P. and Bihar and provide a boost to trade and commerce in the region. Opening new prospects of employment, it will offer direct and indirect jobs to nearly 5,000 people. ■



Shri Nitin Gadkari along with Shri Manoj Sinha, MoS - Communications & Railways and Shri Keshav Prasad Maurya, Deputy CM, UP during the foundation stone laying ceremony

A HUB FOR WORLD-CLASS TECHNOLOGIES IN PORT AND MARITIME SECTOR

A ₹ 70.53-crore initiative, National Technology Centre for Ports, Waterways & Coasts comes up as a nucleus of innovations in the port and maritime sector.

With the vast coastline of 7,500 km, 14,500 km of potentially navigable waterways and the strategic locations on key international maritime trade routes, India's port and maritime sector has the potential to become the engine of economic growth. While it promises prospects, it also poses a need for accelerating research and innovations to keep pace with emerging requirements for new technologies in the sector. The setting up of National Technology Centre for Ports, Waterways & Coasts (NTPWC) at IIT Madras is a major initiative in that direction.

NTPWC has been envisioned as the centre for technological innovations and evolution of new ideas and breakthroughs for the port and maritime sector. It will work as the technology arm of the Ministry of Shipping, providing the needful technological support to ports, Inland Waterways Authority of India and other institutions. It will also provide effective solutions to an extensive range of problems being faced in the industry through scientific support and carry out education, applied research and technology transfer.

Keeping pace with the changing technology

Objectives behind NTPWC

- To empower the 'Make in India' initiative in port, coastal and inland water transport and engineering by developing state-of-the-art technologies and application products
- To enable fast-track innovations in order to provide most appropriate solutions to various challenges in these sectors
- To create a pool of competent manpower for the industry, equipped with state-of-the-art theoretical and practical know-how
- Self-sufficiency in providing:
 - Short term solutions through scientific studies
 - Technology development
 - Technical arm in identifying complex problems and solving issues



The entrance of IIT Madras



Hon'ble Minister of Shipping, Shri Nitin Gadkari and Hon'ble Minister of State, Shri P.Radhakrishnan at the inauguration of the setting up of NTCPWC

The centre will carry out applied research in the areas of 2-D and 3-D modelling of ocean, coastal and estuarine flows, sediment transport and morph-dynamics, navigation and manoeuvring, dredging and siltation, port and coastal engineering-structures and breakwaters, autonomous platforms and vehicles, experimental and CFD modelling of flow and hull interaction, hydrodynamics of multiple hulls and ocean renewable energy. It will develop indigenous software and technology, make technical guidelines and standards and address port and maritime issues with models and simulations. The centre will not only help generate new technology and innovations but also work towards their successful commercialization.

One of the key objectives behind the setting up of NTCPWC is the development of indigenous technology in the marine sector. The Centre will reduce the dependence on foreign technology and give a significant boost to the 'Made in India' impetus.

The foundation for the Centre was laid on 26 February, 2018 by Shri Nitin Gadkari, Minister for Road Transport & Highways, Shipping and Water Resources, River Development & Ganga Rejuvenation. An MoU was also signed between the Ministry of Shipping and IIT Chennai.

NTCPWC is being set up at a cost of Rs. 70.53 crore to be shared by the Ministry of Shipping, IWAI and the Major Ports. The Ministry of Shipping's grant is towards capital expenditure for creating facilities like Field Research Facility (FRF), Sedimentation and Erosion Management Test Basin and Ship/Tow Simulator. The Centre will be self-sustainable in three years through industry consultancy projects for Indian and global port and maritime sector.

The inception of NTCPWC is an answer to a key need and signifies a major leap in indigenous technology in the maritime sector. ■

THREE PROJECTS INAUGURATED AT TUTICORIN PORT

Built at a total outlay of over Rs. 337 crore, the three projects will take the port to a new level.

26th February was a happening day at V.O. Chidambaranar Port, Tuticorin, when three projects were inaugurated in a row by Hon'ble Minister of Road Transport & Highways, Shipping, Water Resources, River Development and Ganga Rejuvenation, Shri Nitin Gadkari. Hon'ble Minister of State for Finance and Shipping, Shri Pon Radhakrishnan was also present on the occasion.

This included an additional Container Terminal Berth at the V.O. Chidambaranar Port, one of the 12 Major Ports in India. Constructed at an outlay of Rs. 312.23 crore, it has a capacity of handling 7.20 MTPA (6 lakh TEUs). Presently, the port has a capacity of 65.90 million tonnes and has 15 berths. Shri Gadkari also commissioned a Truck Parking Terminal at the port. Built at a cost of Rs. 23.69 crore, the terminal can handle up to 200 trucks. A Port Information Centre was also inaugurated, which had been built at a cost of Rs. 1.89 crore. The

Projects	Cost
Additional Container Terminal Berth at the V.O. Chidambaranar Port	Rs. 312.23 crore
Truck Parking Terminal at the Port	Rs. 23.69 crore
Port Information Centre	Rs. 1.8 crore

Information Centre has 60 LED panels depicting the evolution and growth of the port and has touch-screen kiosk systems containing in-depth information on seaports.

Speaking on the occasion, the hon'ble minister emphasized the importance of Tamil Nadu in the Sagarmala Programme. He said that over 100 projects with an investment of over 2.5 lakh crore were envisaged under the programme.

Pointing towards the logistic importance of the Tuticorin Port and the role it plays in the supply of coal for power generation, the minister said that deepening of the port would make it possible for mainline vessels to carry export containers from the industrial hinterland of the state. This would help avoid trans-shipment at foreign ports, bringing down the cost of coal transport as also the overall cost of generation of electricity. He further informed that an investment of Rs. 3,000 crore had been set out for the sector.

Shri Gadkari announced that the National Highway linking the port to the mainland would be widened to 6 lanes to reduce congestion, and the construction of the road from Tuticorin to Madurai would also start soon. He expressed hope that the Truck Parking Terminal would provide the much-needed resting facility to truck-drivers. ■



Inauguration at the Tuticorin Port: Hon'ble Minister of Shipping, Shri Nitin Gadkari with Hon'ble Minister of State, Shri P. Radhakrishnan and port officials on the dias

GOA GETS ITS NEW INLAND FERRY SERVICE

As a new ferry service starts in Goa, it is all set to cut down the travel time and add to the experience of the traveller.

Hon'ble Union Minister, Shri Nitin Gadkari inaugurated the inland ferry services in Goa on 20 March, 2018. The inaugural plaque was unveiled at the newly constructed Airport Ferry Terminal (AFT) at Baina beach in the port city of Vasco. The ferry services will be from Baina to Panaji and will reduce the duration of travel-time to 20 minutes as compared to 1 hour earlier.

In his address, Shri Gadkari said that India has about seven thousand five hundred kilometres of seashore which can help the development of the country while giving tourism the much-required boost.

The ferry service is aimed at adding yet another layer of quality experience to tourists visiting the coastal state, as well as locals, looking to travel to their respective destinations to and from the airport to different parts of Goa.



Hon'ble Minister of Shipping, Shri Nitin Gadkari inaugurating the ferry services

"India has about seven thousand five hundred kilometres of seashore which can help the development of the country while giving tourism the much-required boost."

– Shri Nitin Gadkari

A ferry ride in Goa is ideal for those people who want to see Goa in its real and rural form. The red-orange sunset illuminating narrow inlets and weathered Portuguese houses in hinterlands are some of the most common sights while riding across

in a ferry boat. The ferry rides in Goa were primarily started as a lifeline that connects various regions that do not have direct or quicker access by roads.

In his address, the Hon'ble Minister said that while addressing the needs of the poor, environment and ecosystem must be given its due priority. To achieve this, all the stakeholders need to make a concerted decision and action. He said that Goa owes its emergence as a tourism state due to its coastal belt. The tourism sector has very high potential for Investment and employment generation.

The Minister said that the use of waterways is economical, environment-friendly and needs better utilization. Shri Gadkari pointed out that tourists travelling through the waterway can save time and money and avoid pollution and ease the road congestion.

He said, the central government has so far provided Rs. 15,000 crore for development of roads in Goa. He assured that Goa will receive all the funds required for the development projects under 'Sagarmala'. Shri Gadkari suggested that the hotels and airports in Goa can be connected with waterways. He said that Goa could become a 'Cruise destination' in the future, which shall generate huge employment.

The occasion was marked by the presence of Shri Shripad Naik, Union Minister of State for AYUSH (Independent Charge); Shri Narendra Sawaikar, MP, South Goa; Shri Vinay Tendulkar, MP, Rajya Sabha; Shri Francis D'Souza, Minister of Urban Development, Government of Goa; and Shri I. Jeyakumar, Chairman of Mormugao Port Trust. ■

NEW POLICY INITIATIVES FOR CRUISE TOURISM

Exemption of biometric enrolment and many new steps to generate a new culture for cruise tourism.

Cruise tourism has an immense potential in the country, which can impact the local economy in a big way, apart from adding to the country's exchequer. With a view to promote cruise tourism, cruise tourists with e-visas have now been exempted from the requirement of biometric enrolment till 31 December, 2020. The initiative has been implemented on five Major Ports – Mumbai, Cochin, Chennai, Mormugao and New Mangalore.

This will make immigration clearance of cruise tourists faster, leaving them with more time to spend on the shore. This will also help cruise lines to commit more ships to these destinations in their itinerary. The step assumes significance based on the schedule of arrivals of cruise ships for season 2017-18 and 2019-20. Many of the cruise ships coming to India are mega ships with 2,000-4,000 passengers on board.

Simultaneously, the Government has also eased out many procedures for a customer-friendly and hassle-free immigration regime. The Standard Operating Procedures (SOPs) to

handle cruise vessels and cruise passengers have been revised in November, 2017 and have been implemented at the five major ports which receive cruise vessels.

The revised SOPs facilitate the submission of digital documents, ensuring seamless entry and exit for vehicles and persons. The revised SOPs also simplify the Port Health Organization clearance procedure. To accelerate the immigration process and cut the processing time, e-Landing Cards for shore excursion have also been implemented, doing away with face-to-face checks except at the first port of entry and last port of exit, and allowing carrying of valid photo I-card for Indian cruise passengers on the domestic leg instead of the passport.

Mumbai Port has taken up upgradation of cruise terminals at a cost of Rs. 197 crore and Cochin Port prepares to build a new terminal at a cost of Rs. 25.72 crore. The projects at the two Major Ports are expected to be completed by August 2019 and February 2020 respectively. ■



In the more receptive waters: a luxury cruise liner on the shore

DEVELOPMENT OF INLAND WATERWAYS FOR THE TRANSIT OF INDO-NEPAL CARGO

While inland waterways through the Kosi and Gandak will provide Nepal an additional route for cargo, it will also boost cross-border connectivity between India and Nepal.



Shri Narendra Modi, Hon'ble Prime Minister and Shri K.P. Sharma Oli, Hon'ble Prime Minister of Nepal issued a Joint Statement on New Connectivity between India and Nepal through Inland Waterways

In a symbiotic cooperation, India and Nepal seek to boost cross-border connectivity as the two sides have decided to develop inland waterways for cargo movement.

During the visit of Prime Minister of Nepal to India on 7 April 2018, India and Nepal took a landmark decision to develop waterways for the movement of cargo between the two countries, within the framework of trade and transit arrangements. The decision provides an additional access route for Nepal. The Government of Nepal is interested in developing inland waterways (IWT) as

a mode of transport for transit access as well as for cross-border connectivity with India. The River Kosi (National Waterway-58) and the River Gandak (National Waterway-37) offer inland waterway connectivity between India and Nepal.

Subsequent to a proposal from the Ministry of Shipping in October 2017, the Department of Commerce has initiated a discussion to consider the inclusion of 'inland waterways' as a mode of transport in the Indo-Nepal Treaty of Trade and Transit.

Inland Waterways Authority of India

(IWAI) already has an inland waterway terminal at Gaihat, Patna and is developing a new inter-modal IWT container terminal at Kalughat on National Waterway-1(River Ganga). These terminals will facilitate transportation of containerized cargo from Kolkata to Kalughat (Patna) through IWT mode, which can be then trans-shipped by rail or road from Patna to Nepal and vice-versa. Once fully operational, the waterways will open new channels for both Nepal's bilateral trade with India as well as its transit trade via India. ■

PRIVATE SECTOR PARTICIPATION IN INLAND WATERWAYS

The agreement on O&M of IWAI terminals opens up new prospects of private sector participation in the inland waterways sector.

Inland Waterways Authority of India (IWAI) has been constantly tapping the prospects of working on a model of the public-private partnership for its projects. The objective is to achieve the right synthesis of the financial capabilities and operational efficiency that the private sector participation brings in and the supervisory control which the public sector ensures. IWAI's efforts to pool in the strengths of the private sector have brought in desired results.

In May 2015, IWAI and International Finance Corporation (IFC) signed a financial advisory services agreement, under which IFC is to identify the sub-projects for a lead advisory support. Accordingly, after conducting preliminary assessment, IFC identified a project titled 'Cluster of Garden Reach GR-II, GR-I and BISHN Terminals', which is to be taken up as a sub-project under the PPP mode. IFC conducted technical and legal due diligence on the key issues regarding the project. The due diligence exercise included the scope, business outline and preliminary risk analysis of the project.

For the project execution, IWAI had received three bids in response to its tender floated in July 2016. A consortium of Summit Alliance Port Limited (SAPL) and Summit Power Limited was finalised as the selected bidder and the letter of award was issued to the consortium in August 2017. Subsequently, SAPL informed IWAI that an Indian company with respect to SPV has been formed in the name of Summit Alliance Port East Gateway (India) Pvt. Ltd.

On 26 April 2018, IWAI and Summit Alliance Port East Gateway (India) Pvt. Ltd. signed an agreement under a revenue-sharing model for equipping, operating and managing inland waterway transport at Garden Reach Terminal in Kolkata and Kalughat Terminal in Patna. This will also facilitate inward and outward movement to and from Nepal through the inland waterway.

The project is the first of its kind under the operate-and-maintain model in the inland waterways sector in India, which takes the idea of public-private partnership to another milestone. ■



Signing of Contract by Summit Alliance Port East Gateway (India) Pvt. Ltd. and IWAI on Equipping, Operating and Managing Inland Waterway Transport at Garden Reach Terminal in Kolkata and Kalughat Terminal in Patna

A NEW LIFE FOR THE OLD NAVIGATIONAL LOCK

The old navigational lock at Farakka to undergo modernisation after transfer to IWAI.

The existing navigational lock at Farakka which has been operational since 1978 has turned obsolete. It takes about two hours or more for a vessel to pass upstream or downstream through the lock at present. The construction of a new lock will cut the time to just about 40 minutes.

Keeping the need in view, the Union Cabinet, on 6 January 2016, accorded its approval for the transfer of the land from Farakka Barrage Project to Inland Waterways Authority of India (IWAI) for construction of a new navigational lock parallel to the existing lock at Farakka. Since then, IWAI has been involved in the construction of a new navigational lock with a view to allow smooth flow of cargo and passengers vessels.

As a step forward, the existing Navigational Lock at Farakka and its adjoining land measuring 7.155 Ha. (17.682 acres) along with the existing boundary wall and structures, such control tower, electrical installations and other constructions was transferred from the Farakka Barrage Project (FBP), Ministry of Water Resources, RD & GR to the Inland Waterways Authority of India (IWAI) on 6 April 2018, as IWAI is its main user . The process of handing over and taking over of the navigational lock, adjoining land and related assets was completed by FBP and IWAI on 9 April 2018. After the construction of the new lock, IWAI will modernize the transferred lock, which will give a new pace to movement of vessels in Farraka. ■



Conceptual Design of the Navigational Lock

A PORT THAT'S OLDER THAN HISTORY



Reflecting in the translucent waters of the Arabian Sea, the Mangalore Port is engrossed in the reminiscences of its long, glorious past: a past that is resplendent with the magic and magnificence of centuries that faded into the pages of history. It travels back to prehistory and traces itself in the antiquity of the epic times. Built by the ancient sea-farers of the Tulu Nadu region, the Mangalore port during the ancient times emerged into a thriving port on the western coast of India, bustling with ships from distant lands and agog with hectic trade and commerce. Today, the port handles 75 per cent of India's coffee and cashew exports. The port is used as a staging point for sea traffic along the Malabar Coast.

A fabled port, Mangalore has seen thousands of years. It has seen much of grandeur and glory. The medley of ships with myriad-hued flags coming from far-off coasts. The thronging of merchants and travellers seeking fortune. And the battle and blood for supremacy over the sea.

The Arabian Sea has been a mute witness.

ANCIENT INDIA'S GATEWAY TO WORLD TRADE

The area that surrounds the port finds mention in the pages of ancient Indian scriptures. During the epic period of the Ramayana, Mangalore was part of the kingdom of Lord Rama. Later, the youngest of the Pandavs, Sahdev ruled the city during the Mahabharata era. As mentioned in the Mahabharata, Arjuna visited the place several times. In the third century BC, the town formed part of the Mauryan Empire, ruled by emperor Ashoka. The region was known as 'Sathia' or 'Shantika' during the Mauryan period.

The grandeur and glory that Mangalore city was celebrated for in the ancient times flowed from its eminent port. The fame of the Mangalore port reached as far as far as Greece and Rome, and pulled numerous traders, travellers and adventurers to its shores. During the first century AD, the Roman historian,

Pliny mentioned the port city as 'Nitrias'. Though a flourishing port, he describes it as undesirable for disembarkation on account of the pirates that frequented the sea. Claudius Ptolemy, the second century Greco-Roman geographer and historian, refers to the place as 'Nitra'. Cosmas Indicopleustes, a Greek monk, in his 6th century chronicle 'Christian Topography' writes about the port of 'Mangarouth' (ancient Mangalore) as a major centre for pepper export.

For thousands of years, the Mangalore port has been one of ancient India's most thriving gateways for the export of pepper, cashew, sandal and myriad produces. The harbour attracted merchants and sailors from Sumatra, Greece, Rome, Persia, Yemen, Morocco and many other distant lands.

THE HARBOUR THAT LEFT IBN BATTUTA DAZZLED

Ships kept sailing and the harbour never went quiet. But it was during the reign of the Alupa dynasty which ruled

the region from 567 to 1325 AD, that the Mangalore harbour emerged into one of the most important destinations on the trade map of the medieval world.

In the 12th century, Abraham Ben Yiju, a less-known Tunisian Jewish merchant, descended the sands of the Mangalore port to find his destiny in the city. He found the port city to be so fascinating that he settled and remained there for over two decades. "Ben Yiju, like so many other Middle Eastern merchants, was drawn to Mangalore because of the economic opportunities it offered as one of the premier ports of an extremely wealthy hinterland: a region that was well endowed with industrial crafts, apart from being one of the richest spice-producing territories of the medieval world. Later the area's wealth was to attract the much less welcome attention of the European maritime and colonial powers," writes Amitav Ghosh in his travelogue 'In the Antique Land'.

The port city finds vivid description in the memoirs of the Moroccan traveller

Ibn Battuta, who visited the city in 1342. When Battuta roamed through the harbour and bazaars, he was baffled at the splendour and wealth he witnessed. He states that there were four thousand traders from Yemen and Persia in the bazaars of Mangalore alone. Large quantity of pepper and ginger were exported from Mangalore to the Arab countries. The town was regarded by the Arab travellers as one of the biggest metropolises and a great commercial centre. He mentions a special class of merchants as 'protected merchants'. Possibly, they were Arab merchants who traded under the protection of kings. The rulers offered protection to these traders because their activities brought immense wealth to the kingdom.

The accounts of the foreign travellers like Ibn Battuta, Barbosa, Verthema, Caesar Frederick and Dalle Valle throw light on the condition of trade in Mangalore from 14th century to the 17th century AD. Mangalore was a flourishing trade centre under the Vijayanagara rule and it continued to

be so, even centuries later. During these periods Mangalore was frequented by the Chinese, Arab and Portuguese traders. Under Vijayanagara rule, Mangalore had been developing as a major maritime trade centre and harbour under their pioneering leadership. Their vessels were engaged not only in coastal trade but also trans-oceanic trade. These contacts with the foreign countries resulted in the growth of indigenous technology of ship-building for all purposes and also in the emergence of a class of mariners capable of shouldering the responsibility of maritime trade and its defence.

**DISCOVERY OF INDIA
BY VASCO DA GAMA**

As Mangalore harbour had immense significance for the trade of spices, which has been considered the gold of the Indies, the Western explorers had ever been setting their ships to discover a sea route to the port. The arrival of Vasco Da Gama near Mangalore is considered by the West as the 'discovery of India'.



The Anglo-Mysore War (1799 AD) that decided the destiny of Mangalore

On May 17, 1498, Vasco da Gama's fleet reached Kappakadavu on the western coast. And that changed the entire course of history for the port city of Mangalore. During the 14th and 15th centuries, it had been ruled by regional dynasties and Muslim merchants were the dominant actors for all kinds of trade. The Portuguese gradually started controlling the shores and within a span of twenty years, they were the masters of the Arabian Sea. In 1526, the Portuguese under the viceroyship of Lopo Vaz de Sampaio, succeeded in defeating the Bangara King and his allies and conquered Mangalore. The trade passed from the Muslim hands to the Portuguese. The Portuguese monopoly over Mangalore's trade went on for nearly two and half centuries.

Hyder Ali, the ruler of the Kingdom of Mysore, conquered Mangalore in 1763, consequently bringing the city under his administration until 1767. Haidar Ali regarded Mangalore important as a naval station, where he established a dockyard and an arsenal, and placed it under the command of one Latif Ali

Baig. Haider Ali changed the name of Mangalore to Corial and the Bundar as Port Royal.

Later, the port city was conquered by the British East India Company, which ruled it from 1767 to 1783, but it was subsequently wrested from their control by Hyder Ali's son, Tippu Sultan in 1783. The Second Anglo-Mysore War ended with the 'Treaty of Mangalore', signed between Tippu Sultan and the British East India Company on March 11, 1784. After the defeat of Tippu in the 4th Anglo-Mysore War, the city remained in control of the British.

According to the Scottish physician, Francis Buchanan who visited Mangalore in 1801, Mangalore was a rich and prosperous port with flourishing trading activity. Rice was the grand article of shipment and was sent to Bombay, Malabar, Goa and even far-off Muscat. Supari or betel-nut was shipped to Bombay, Surat and Kutch, and pepper and sandalwood to Bombay. Turmeric was sent to Kutch, Surat, Bombay and Muscat along with

cassia cinnamon, sugar, iron, saltpeter, ginger, coir and timber.

The port city has extensive settlements of foreign merchants including the large community of expatriate Middle-Easterners and Persians.

A Portuguese sailor, Duarte Barbosa, who visited the city early in the 16th century, noted that the city's merchants included 'Arabs, Persians, Guzarates, Khorasanys, and Decanys'.

THE TIDES OF THE MODERN TIMES

The advent of the 20th century added new chapters to the story of the ancient port. Though the past glisten of the port had faded a little in the course of time, the linking of Mangalore with the Southern Railway in 1907 gave the Mangalore port a fresh new strategic importance. Going beyond the traditional export of spices, cashew and other local produce, the shipments widened to a



Mangalore Bunder during 1850-1897

diversity of goods that reached the port by locomotives. The port again became the hub for trade and commerce in the region.

In 1974, the new Mangalore port came into being. It was declared India's 9th Major Port on May 4, 1974 and formally inaugurated by the former prime minister, Indira Gandhi on January 11, 1975. It was called New Mangalore Port to distinguish it from the old harbour or port located in Mangalore city which is now called Mangalore bunder or Hale bunder. Till 1980 the management and operations

were administered by the central government. With other ports emerging on the map, the new Mangalore port descended to the tenth place. In 1980, New Mangalore Port Trust Board was constituted under the Major Port Trust Act, 1963 and the port came under the administrative control of the Ministry of Shipping. Since then, the port has been playing a catalytic role in the economic development of the state.

Located about 352 kilometers northwest of the Kochi port and 315 kilometers southeast of the Mormugao

port on the Arabian Sea, the Mangalore port is an all-weather port and ranks the eighth biggest port in India today.

WHERE YESTERDAY AND TOMORROW MEET

While thousands of years of a past makes the New Mangalore Port one of the oldest ports of the world along with Alexandria, Tyre and Piraeus, some of the futuristic technologies it implies keep it a step ahead of the time, giving it a cutting edge in operational efficiency and capacity.



The modern face of New Mangalore Port

The New Mangalore Port has a total capacity to handle 68 MTPA of cargo. It has 15 berths and one Single Point Mooring. The port has two transit sheds of 7752 sq.mtrs with a capacity to store 19,390 metric tonnes of cargo and 5 storage sheds with a total area of 17,700 sq. mtrs having a storage capacity of 44,250 tonnes of cargo. In addition to the above, 15 godowns are available with an area of 53,204 sq. mtrs., having a total capacity to store 1,32,720 tonnes of cargo. The port has provided 62,000 sq. mtrs. of paved

container stackyards and 1,82,149 sq. mtrs of open stackyards for storing other bulk cargo.

The private operators offer an additional storage space 1,65,000 KLs for liquid cargo and Ultra-tech Cement and Ambuja Cement have provided cement storage silos with a capacity of 25,000 metric tonnes.

The New Mangalore Port touched a historical mark of handling of 1 lakh TEU (twenty-foot equivalent unit) of containers in 2017-18. It touched the figure on February 26, 2018. Crossing the

1 lakh-mark is a significant measure that the port has set.

Overlooking the blue endlessness of the sea, the New Mangalore Port spans with a multitude of giant ships and tiny boats anchored on the shore, humming with excited voices and pulsating with daily fare. Down a ridge of rising hills which extends out of a towering knuckle of peaks, it spreads in its quaintness as a major business interface between India and the world beyond the sea. ■



SENTINELS OF THE SEA

Standing as sentinels of the sea, lighthouses have been guiding mariners to find their way. Beaming signals to navigators to help them find the right direction on their course. Lighthouses have been around since the dawn of the civilisation. The world's first recorded lighthouse was the Pharos Lighthouse in Alexandria (Egypt). Built in 280 B.C., it was more than 450 feet tall and its light was visible from more than thirty miles away.

Rising in its imposing, rugged structure, a lighthouse is a tower topped equipped with a light equipment with distinct character for giving mariners their bearings. The beacon is used by mariners to navigate in the sea at night. Lighthouses come in all shapes and sizes and color scheme which also act as day mark. They are usually located on the coast, on islands, or in the middle of busy harbours. No matter where it is located, the purpose of a lighthouse is always the same – to guide ships for their course with safety on their way.

The 320 km length of the coastline of Karnataka, which is part of the celebrated Malabar Coast, is dotted with four lighthouses.

“I can think of no other edifice constructed by man as altruistic as a lighthouse. They were built only to serve.”

– George Bernard Shaw



Oyster Rock Lighthouse: As the name suggests, this lighthouse is located on Oyster rock island, off Karwar coast. This is a 20-meter-high circular masonry tower was built in 1860 and subsequently modernized in 1933 and 1999. The lighthouse has a luminous range of 20 nautical miles.



Bhatkal Lighthouse: Tucked away in a small town called Bhatkal, it constitutes a 14-meter-high, square masonry tower with a luminous range of 27 nautical miles. This stone masonry lighthouse was built in 1891 and subsequently modernized in 1995.



Kaup Lighthouse: A stunning architecture from another era, the lighthouse is in Muloor, about 12 km away from Udupi city, and is made of 34-meter-high circular stone masonry tower with luminous range of 24 nautical miles. It was built by the British in 1901 and subsequently modernized in 2003-04.



Suratkal Lighthouse: It is located north of port of Mangalore and is made of 36-meter-high square masonry tower with a luminous range of 31 nautical miles. The lighthouse tower was constructed in 1972. Differential global positioning system (DGPS) was established at this station in year 1998.

Govt. report bats for multimodal transport integration

UDD team studies public transport systems in Seoul, Singapore during Wor

ALOK DASGUPTA
The city's multiple modes of public transport, including suburban railway, buses, Metro Railway, Mumbai and taxis, should be run by a single authority to ensure efficiency, says a report by the State Urban

transport initiatives. The Leaders in Urban Transport and Planning (LUTP) study tour, held from March 4-10, was organised by the Ahmedabad-based CEPT University, Union Ministry of Housing and Urban Affairs and the World Bank.

Among the 20 suggestions in the report is one which asks the Metro and suburban railway network to be equipped with buses for first-mile and last-mile connectivity. It also proposed a contactless card system, calculated on the basis of distance covered for the mode used. This card should be used for all public transport, including taxis, the report said.

Other suggestions included giving passengers the option to consent credit



Efficient, easy People line up to buy tickets at Se railway station.

Cochin Port Trust breaks 10-year jinx to make profits in 2017-18



Prasenjit Chatterjee, Cochin Port Trust, says the port has broken a 10-year jinx to make profits in 2017-18.

After 10 years, the Cochin Port Trust has managed to turn a profit in 2017-18. The port's revenue has increased by 10% over the last year, while its expenses have decreased by 5%. The port's profit is expected to be around ₹100 crore in 2017-18.

The port is looking at the coastal shipping route as a key area for growth. It is planning to invest in new ships and infrastructure to improve its services. The port is also looking at expanding its cargo handling capacity.

TRANSFORMING MUMBAI

It was for the first time that the Mumbai Urban Infrastructure Trust (MUIT) has been set up. The trust is expected to be a game-changer in the city's development.



'I WANT TO DEVELOP COASTAL SHIPPING FOR THIS CITY'

Deputy Chief Minister Anil Desai has expressed his desire to develop coastal shipping in Mumbai. He said that this mode of transport is more efficient and cost-effective.

Krishnapatnam Port's cargo handling rises 25% in FY18

Krishnapatnam Port has achieved a 25% increase in cargo handling in FY18. The port's revenue has also increased significantly. The port is planning to invest in new infrastructure to further improve its services.

The port is also looking at expanding its cargo handling capacity. It is planning to invest in new ships and infrastructure to improve its services. The port is also looking at expanding its cargo handling capacity.

Waterways are a win-win: Gadkari

Waterways are a win-win for the country, says Union Minister Nitin Gadkari. He said that waterways are more efficient and cost-effective than other modes of transport. He also said that waterways can help reduce the carbon footprint of the country.

INDIA, UAE CONSOLIDATE TIES

Prime Minister Modi and Crown Prince Sheikh Mohammed bin Zayed Al Nahy discussed strategic partnership with trade, investment amongst other things. The two leaders agreed to strengthen the ties between India and the UAE.

'Sagarmala, GST, UDAAN, Chahabar' Gateways to India's Open Economy: Gen (Dr.) V.K. Singh

Gen (Dr.) V.K. Singh said that Sagarmala, GST, UDAAN, and Chahabar are the gateways to India's open economy. He said that these initiatives will help India become a global economic superpower.

Govt takes EPC route for waterways

The government has decided to take the EPC route for waterways. This means that the government will hire private companies to design, build, and operate the waterways. This is expected to speed up the development of waterways in the country.

Thane-Vasai inland waterway: Phase I may be ready by Dec

The first phase of the Thane-Vasai inland waterway project may be ready by December. The project is expected to provide a faster and more efficient mode of transport between Thane and Vasai.

The government is also looking at other waterway projects in the country. It is planning to invest in new infrastructure to improve the waterway network. The government is also looking at other waterway projects in the country.

'Sagarmala will cut logistics cost dramatically'

Sagarmala will cut logistics costs dramatically, says Union Minister Nitin Gadkari. He said that the Sagarmala project will help reduce the cost of transporting goods from the coast to inland areas.

Ro-Ro is a go

The much-awaited water transport service begins next month. This will give Alibaug's development a fillip. The Ro-Ro service will provide a faster and more efficient mode of transport between Alibaug and other parts of the region.

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give the landlocked country sea connectivity, amid China's initiatives to improve the Himalayan

India should give the landlocked country sea connectivity, amid China's initiatives to improve the Himalayan region. This will help India become a global economic superpower.

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which would be a game changer for Nepal.

Oli, on a three-day visit to India, promised India a relationship of trust. "We need support and cooperation of friends. Our future lies in expansion of economic engagement and bilateral trade," he said in a statement.

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