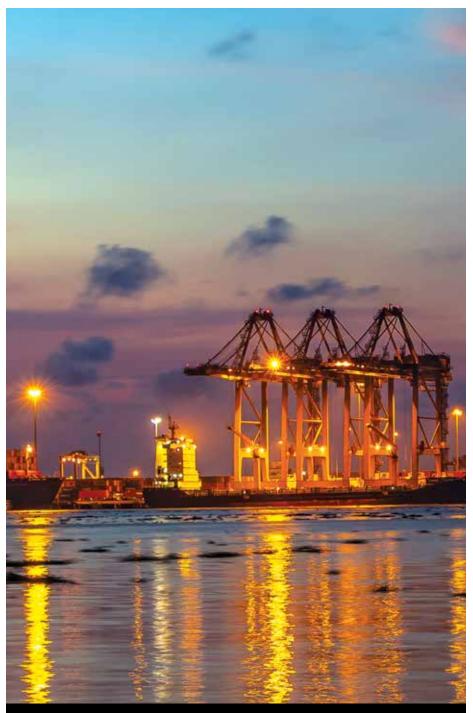




THE SAGARNALA POST



State in Focus: Kerala





The Spice Coast of the Medieval World 18



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The Spice Coast of the Medieval World



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From the SECRETARY'S





We look at the Sagarmala Post as an important channel of communication that keeps you updated about the progress of the Sagarmala Programme and the pursuit and perseverance behind it. As the programme blazes new trails, it is worthwhile to share some recent developments and happenings through this issue.

It gives me an elated feeling to share that the Sagarmala Programme has received the Platinum Award at the 52nd Skoch Summit for its initiatives in the infrastructure sector. Earlier, it was conferred with the 'Order of Merit'. This honour is a recognition of one of the most diversified and multi-dimensional initiatives that India has embarked upon in the recent times.

The role of multi-modal platforms has a crucial significance in bringing about an infrastructural transformation in logistics. The construction of IWAI's multi-modal terminal at Haldia (West Bengal) commenced in mid-March. An important component in the development of the National-Waterway-1, the terminal is seen as a major convergence point for rail, road and waterways in the region. In fact, the entire infrastructure for National Waterways-1 is expected to be ready by the end of 2022, as scheduled.

On the other hand, the country's largest container port, Jawaharlal Nehru Port has rolled out the Direct Port Delivery (DPD) system, a unique solution towards more time-efficient and cost-effective movement of containers. A breakthrough of its sort, the new system will cut down the delivery time from seven days to just 48 hours.

Recently, under the Sagarmala Programme, there has been an accentuated emphasis on skill development to bridge the skill gap in the maritime sector. The Centre of Excellence in Maritime and Ship-building (CEMS) has unrolled a plan to set up 24 labs in Mumbai and Visakhapatnam. While skill development in port and maritime promises coastal prosperity, it enables India to emerge as a major source of skilled people in the sector globally.

A path-breaking decision this year by the Ministry is doing away with licencing requirements for both chartering of foreign flagged ships by citizens of India, Indian companies and registered societies as well as permitting coasting trade of India by foreign lines for the coastal movement of EXIM-laden containers for trans-shipment and empty containers. Similar relaxation was provided for the shipments of agriculture, horticulture, fisheries, animal husbandry commodities and fertilizers. The move will be a game changer in facilitating trade and reducing the logistic cost. It will turn Indian ports into trans-shipment hubs, bring down freight rates by stimulating competition and make the Indian trade more competitive.

This edition is centred around Kerala as the state in focus. A major trans-shipment port at Vizhinjam has been planned and is being developed. India relies on international ports for its trans-shipment, and the Indian port industry loses nearly Rs. 1,500 crore every year as revenue. With the Vizhinjam trans-shipment port, a new chapter will begin. Besides, the Cochin Port is engaged in the construction of an international cruise terminal at Ernakulam Wharf, which will spur international cruise tourism. The pages of the newsletter also trace the chequered past of the Cochin Port – the legendary port that scintillates in the memory of history.

With every new issue in hand, we eagerly wait for your feedback and suggestions. Do share your mind – about the content of the newsletter, as about Sagarmala Programme. Your inputs will make a difference.

Gopal Krishna, IAS Secretary, Ministry of Shipping



COCHIN PORT TRUST : STRIDING IN MANY AREAS

CPT is engaged in a massive infrastructural transformation and capacity building. A long-term success story has just begun.

Constantly striving to expand its operational capabilities, the Cochin Port Trust is set for a major expansion and infrastructural transformation. From erecting a major trans-shipment terminal and building infrastructure for the last-mile connectivity to creating a multi-user liquid terminal, CPT is engaged in many areas. These initiatives will take the port's operations to new levels.

International Cruise Terminal at Ernakulam Wharf

The Cochin Port Trust proposes to provide International Cruise Terminal facilities inside the Ernakulam Wharf area to cater to the cruise passengers. The functional and service requirements at this cruise terminal will be as per the Standard Operating Procedures (SOP) issued the by Ministry of Tourism. The project involves the construction of an International Cruise Terminal building over an approximate area of 2253 m2 with state-of-the-art facilities.

Construction of Rail Overbridge at Vallarpadam

The work of the rail overbridge is part of the Rail Connectivity project of The International Container Trans-shipment Terminal (ICTT), Vallarpadam. The ICTT was commissioned in February 2011 with a temporary level-crossing. The work of RoB has been taken up to improve the connectivity, replacing the temporary level-crossing. The project involved an outlay of nearly Rs. 23 crore and was taken up with the Government Budgetary Support (GBS). The work completed on 30 April 2018.

Refurbishment and capacity enhancement of Coastal Liquid Terminal at Cochin Port

The project involves multi-level work and entails laying an additional 750 NB pipeline in Cochin Oil Terminal (COT) along the existing piping network to tie up with provision available on the 750 NB pipeline of BPCL-KR behind COT; conversion of the existing 30-inch crude line at COT into white oil service;





Coastal Liquid Terminal at Cochin Port

STATEFOCUS

and re-modelling of the North Tanker Berth (NTB).

The Ministry had sanctioned the project proposal for Rs.19.95 crores, with 75% financial assistance of Rs.14.9625 crore under the scheme 'Assistance to Coastal Shipping'. The balance 25% has been funded by BPCL. The work completed on 13 January 2018, taking a total cost of nearly Rs. 19.25 crore.

Construction of Multi-user Liquid Terminal at Puthuvypeen SEZ, Cochin

The Cochin Port, as part of its expansion programme has taken up the construction of a Multi-User Liquid Terminal (MULT) in the Puthuvypeen SEZ at an estimated cost of Rs. 240 crore. The terminal will facilitate the handling of LPG, bunker fuel and other POL cargo.

The work is in progress and the overall physical progress has reached 94% of completion. The project is expected to be complete by August 2018.



Multi-berthing Platform, Puthuvypeen SEZ, Cochin

Out of the total project cost, Rs. 182 crore is funded by Indian Oil Corporation Ltd. (IOCL), one of the co-developers of the SEZ. According to the agreement, IOCL will use the berth for a maximum of 161 days in a year for handling LPG, free of berth hire charges and the Cochin Port Trust will be free to use the terminal for the balance 204 days in a year. A dedicated barge berth is also being constructed adjacent to the MULT for supplying bunkers to ships calling at anchorage. The project is of tremendous importance for the Government of Kerala in the background of major road accidents that happened in the past involving LPG bullet tankers. The proposed terminal can reduce road haulage of LPG through Kerala. The LPG storage tanks are being constructed by IOCL in the Puthuvypeen SEZ.





REMOVAL OF LICENSING REQUIREMENTS: POST-CABOTAGE SCENARIO

The Ministry's move to relax the cabotage law is a breakthrough that may alter the entire eco-system in logistics.

Following the recent notifications issued by the Ministry of Shipping, the licensing requirements have been removed for chartering of foreign registered ships by citizens of India, companies incorporated in India and societies registered in India, for the coastal movement of the following :

- EXIM Trans-shipment Containers and Empty containers
- Agriculture and other commodities
- Fertilizers

This shift in policy is in line with the Government of India's efforts to promote trade and ease of doing business.

According to the previous policy, foreign shipping lines were permitted to operate their feeder ships along India's coastline only if Indian flagged vessels were not available. Consequently, most container lines serving the country chose to use nearby foreign ports to trans-ship cargo meant for India on their foreign-flagged feeder ships, to avoid violating the restrictions on cabotage.

The objective of removing the licensing requirement is two-fold:

- Encourage Indian ports and terminals to consider expanding into aggregation and trans-shipment hubs as several ports have the potential to be developed further. This will also address the issues of empty containers accumulating at some ports while others face a shortage of empty containers, resulting in significant additional cost of repositioning. Higher competition amongst feeder vessels and reduced cost of empty container re-positioning will eventually benefit the EXIM trade.
- Increase the share of coastal shipping, which currently serves six per cent of the demand of the transportation of goods.

About 33 per cent of India's cargo containers are currently trans-shipped at ports outside India, mainly at Colombo (Sri Lanka), Port Klang (Malaysia), Salalah and Jebel Ali (Dubai) and Singapore. This economically inefficient logistics results not only in raising the costs of EXIM operations but also traffic growth and job creation in foreign ports. In 2008, this figure was 26 per cent, suggesting a growing trend of trans-shipping through foreign ports.

Due to extra port handling at trans-shipment hubs, exporters and importers in South India incur an additional charge of Rs. 5,000 to 6,000 per TEU, making them less competitive and adding huge costs to the economy. Indian ports are losing nearly Rs. 1,500 crore per year in business, which also results in a significant loss of revenue potential for Indian port operators.

As shipping lines typically take a long-term view when deciding their preferred trans-shipment route, the assessment of results of trans-shipment will take some more time. However, there are some early signs of impact, for example:

- Empty container repositioning and EXIM-laden container handling has begun almost immediately after relaxation of cabotage. A total of 3,583 TEUs was handled in the month of May. During July, the trans-shipment volume handled at the Indian ports has risen to 16,543 TEUs, out of which around a two-third volume involves empty container repositioning. As per the data received from CSLA, in case of no cabotage relaxation, the container would have been trans-shipped by ports such as Colombo (6,783 TEU), Singapore(3,639 TEU), Port Klang (1,820 TEU) and others (4,301), which has benefitted the ports and the EXIM trade significantly.
- Shipping lines are opening new routes in their internal systems to offer potentially cheaper movement of containers through trans-shipment from the eastern coast of India. Further, due to geo-political situation in Qatar, the shipping lines are increasingly looking for Indian ports for the trans-shipment of GULF cargo.
- Meanwhile, there is a thinking in Bangladesh for declaring the Pangaon and Munsigunj River Terminals (near Dhaka) for trans-shipment of EXIM cargo via Kolkata Port (primarily used for garment export to Europe). Trans-shipment of foreign cargo necessitates the amendment of Indo-Bangladesh Coastal Agreement. This initiative will significantly boost the Indo-Bangladesh ties and augment the trans-shipment potential of Indian ports. The policy change is expected to result in not only handling of 2 million TEUs of Indian cargoes which is trans-shipped in other countries but handling of Bangladesh, Gulf and African cargoes as well.

• The policy shift will benefit textile mills in Tamil Nadu and help in decreasing transportation costs. Textile mills in the state procure nearly 60 lakh bales of cotton from Gujarat, almost entirely transported by road. Transporting cotton through ships would cost mills Rs. 550 to 650 per bale (1 bale = 170 kg), while road transportation charges work out to Rs. 750 to 850 per bale.

The success of cabotage relaxation depends on several factors. The Ministry of Shipping has worked jointly with Customs to ensure uniform standard procedure. For example, the DG systems advisory of 2016 mandated each customs house to follow the standard procedure of filing and approving the Export Trans-shipment Permit (ETP) at the 'port of loading' and filing Exports General Manifest (EGM) at the 'port of gateway'. While Chennai Customs followed the process, the same, inconsistent processes were found to be in practice at other port customs. Similarly, coastal vessels can not get IGM/EGM rotation number for trans-shipment containers. Customs has issued public notices addressing these deviations.

Moreover, Chennai Customs agreed to permit transloading (re-stuffing into new containers) of garment cargo, headed to the United Kingdom from Bangladesh. This is a promising start since Bangladesh is a major exporter of garments and, over time, can prefer to tranship via Chennai instead of Singapore/Colombo. Similarly, Chennai Customs has also agreed on the sea-air trans-shipment of cargo from China to the Middle East. This will be the first such trans-shipment through Chennai, which may open new avenues for transshipment trade volumes.

Furthermore, stakeholder conversations indicate a need for further engagement with Customs to enable coastal shipping of finished vehicles. In the automobile sector, the total potential for coastal shipment is around 1 million Coastal Economic Units (CEUs). Several Pure Car Carriers (PCC) can be used for coastal movement as well, as they call on several Indian ports for EXIM cargo and carry around. 5,000 to 6,000 CEUs at 70 or 80 per cent occupancy. Even though PCCs are exempt from cabotage, they are not allowed to mix EXIM and domestic cargo, hampering the realisation of full coastal potential.

The pivotal enabler for success of trans-shipment is simplified, smooth and online customs transaction, which will further minimize the dwell of transhipment containers. The sea cargo manifest and transhipment regulations 2018 are also in the making in order to ease the trade. The prominent enablers to achieve trans-shipment potential will be port modernization/ mechanization and efficient port eco-system. As many as 107 port capacity expansion projects (cost: Rs. 67,822 Cr) were identified from the port master planning of 12 major ports for implementation over the next 20 years and are expected to add 794 MMTPA to the major port capacity. Out of these, 107 port master plan projects, 16 projects (cost: Rs. 7,417 Cr, 100 MTPA) have been completed, 38 projects (cost: Rs. 20,716 Cr) are under implementation and 9 (Rs. 4,873 Cr) projects are under tendering. Under Project UNNATI, the global benchmarks were adopted to improve the efficiency and productivity of Key Performance Indicators (KPI's) for 12 Major Ports. Around 116 initiatives were identified to unlock more than 100 MTPA capacity in port operations, out of which 87 initiatives have been implemented to unlock around 80 MTPA capacity.

Major ports such as Kamarajar, Chennai and Vizag not only have adequate draft (15.5 metre) to attract panamax-sized container vessels at par with other trans-shipment hubs but also have twin lift capabilities of crane, bunkering and ship repair facilities. Indian ports have seriously engaged with shipping lines to discuss the opportunity, resolve port-specific concerns and offer incentives.

With a view to imbibe professionalism in the working of ports, around 25 MBA graduates from premier institutions in the country have been engaged across all the major ports to help devise and implement the marketing strategy.

All the above-mentioned efforts will help in realising the aspiration of doubling the share of coastal movement by 2025 and in achieving additional container transhipment cargo of 0.2 million TEUs through Indian Ports.

APPOINTMENT

SHRI SANJAY BANDOPADHYAYA



Shri Sanjay Bandopadhyaya has joined the Ministry of Shipping as Additional Secretary from 9th July, 2018. Prior to this, he has been holding the responsibility of the Principal Secretary to the Government of Madhya Pradesh. A 1988-batch IAS officer from the Madhya Pradesh cadre, Shri Bandopadhyaya has been at important positions in various government organisations and has been Joint Secretary in the Ministry of Road Transport & Highways as well as the CEO and Project Director of National Automotive Testing & R&D Infrastructure Project (NATRiP).



DIRECT PORT DELIVERY TRANSPORT SOLUTION ROLLED OUT AT JNPT

With the DPD system, the delivery time will reduce from seven days to just 48 hours.

To ensure faster cargo movement, Jawaharlal Nehru Port Trust (JNPT) has rolled out Direct Port Delivery (DPD) transport solution. So far, nearly 1,600 importers have opted for DPD mode of transport.

In fact, for quite some time JNPT had been thinking of an innovative method to ensure seamless and faster movement of cargo from the port to respective destinations. The Direct Port Delivery transport solution is a major stride in that direction.

Four logistic companies have been appointed to handle container movement on five transport routes going out from JNPT (i) to Gujarat, (ii) Goa and Bengaluru, (iii) Nashik, Aurangabad, Nagpur, Indore and Hyderabad, (iv) Ahmednagar, and (v) local destinations in and around Mumbai. In the new system, containers off-loaded from the vessels will no longer be moved to the Container Freight Station (CFS) yards, where much time is taken for dispatch.





The DPD system is increasingly being accepted as the optimal way of transporting cargo directly from the port to the importers and accounts for close to 39 per cent of the total cargo traffic from JNPT at present.

The new system is not just about transport and delivery. It offers a whole new set of efficiency-driven tools procedures that cut down time and cost as well as efforts.

A whole new culture of efficiency

	-
Quick coordination	Easy coordination between the port and customers
End-to-end delivery	Faster process from the beginning to the end, eliminating middle layers
Faster evacuation	Optimum process efficiency for faster evacuation of containers from the port
24X7 vehicle tracking	Round-the-clock facility to check the movement of the shipment, both through the web and mobile phone
24x7 customer service	Any time-anywhere customer care service

Direct Port Delivery transport solution is an idea whose time has come. Now an exporter or importer can receive his shipment in jiffy. No waiting, no running around. He can even book his cargo sitting in his office through a technology-backed platform.

DEENDAYAL PORT TO HAVE DEDICATED FACILITY FOR FERTILIZER CARGO

The end-to-end mechanisation will eliminate multiple movements, ensuring faster evacuation and less logistics cost.

Now all the activities, right from the unloading of bulk fertilizer cargo from the ships to loading of bagged fertilizer freight on wagons will be fully mechanized at the Deendayal Port at Kandla. A plan is on the way to set up a fully mechanized fertiliser cargo handling facility at the port.

The facility will be developed at berth number 14 of the port, which is being constructed at an approximate cost of Rs.138 crore. The port will further invest approximately Rs.340 crore for the project from its internal resources. Initially, the proposed facility will handle 2.60 MMTPA and subsequently the capacity will be raised to 4.50 MMTPA.

In the proposed project, the fertilizer

cargo will be unloaded using Mobile Harbour Cranes onto Mobile Hoppers. The conveyor system, along with the tipper system, will transfer the cargo to the cargo storage shed of 38,500 m2. The storage shed will be equipped with 40 sets of bagging and stitching units which will feed the bagged cargo directly into wagons to reduce labour, movement and will optimize time and as such the logistic cost will come down.

At present, the handling of fertiliser cargo at Deendayal Port involves multiple movements and agencies. The mechanised facility will reduce that and ensure faster delivery of the cargo to the end users. The facility will bring a host of benefits in terms of cost and delivery time and labour input.

A boon to fertilizer importers

- Efficient operation due to end-to-end mechanization
- No contamination of cargo due to dedicated mechanization and closed PEB shed
- No internal vehicular movement for transfer of cargo
- Less number of labour required due to mechanization and no multiple handling
- One-time transfer through equipment
 and conveyor
- Lower rake turn-around time, lower vessel turn-around time, lower logistics cost

The Standing Finance Committee of the Ministry of Shipping has cleared the proposal for the project and the facility is expected to be commissioned by October 2020.



A view of Deendayal Port



BREAKING THE LIMITS

JNPT has a big role to play in India's maritime sector, scaling newer heights of operational efficiency, expanding the infrastructure to meet the challenges, and breaking the limits to set new measures. Neeraj Bansal, Chairman of JNPT, talks about his plans and perspective in an interview.



Shri Neeraj Bansal, Chairman-in-Charge, JNPT

- Q: Major ports in India have been performing exceedingly well quarter-on-quarter basis. JNPT has been among the top three ports that handled the highest traffic (volume basis). The port closed FY2017-18 by handling over 48 lakh TEU container traffic. What are your plans for FY2018-19 with respect to cargo handling, revenue etc.?
- A: JNPT closed the financial year 2018 at a record level of 4.83 million TEUs and the annual growth of traffic too has been good over the last few years. With the addition of the 4th terminal and capacity addition, JNPT is capable of handling up to 7.5 million TEUs and the total capacity will go up to 10 million TEUs by 2022.

JNPT is also expanding the necessary infrastructure in terms of deepening of navigation channel, 6 or 8 lanes road corridor, dedicated freight corridors, centralised parking plaza and other facilities to meet this new challenge. The Port Trust recorded the highest ever profit before tax of Rs 1,440 crore and a record operating profit of Rs 1,120 crore during FY 17-18. With the coming up of 4th container terminal and other initiatives like dry ports, special economic zones (SEZ), the port is poised to see higher cargo handling and profits.

"JNPT closed the financial year 2018 at a record level of 4.83 million TEUs and the annual growth of traffic too has been good over the last few years."

- Q: Direct Port Delivery now constitutes approximately 39 per cent of your cargo handling. How do you plan to take it forward in FY19?
- **A:** DPD is a win-win situation for export-import (EXIM) trade as well as other stakeholders as it results in substantial saving of both time and cost to the trade. JNPT, although not designed to cater to this mode of transport, decided to take up the system with a view to reduce congestion and also ensure faster movement of cargo from the port. Today, JNPT has achieved close to 39 per cent cargo clearance through DPD system. We plan to increase DPD share further as trade is overwhelmingly in favour of DPD model. As of now, there are more than 1,600 importers who have been given permission to clear cargo under DPD facility. JNPT expects this number to go up significantly in the coming months and the share of DPD to go up to about 70 per cent.
- Q: But, transporters have continuously expressed discontent regarding DPD coupled with decision to give four transport firms the tender to carry goods over five routes. What is the present situation? How do you plan to solve it?
- A: With a view to reduce congestion and implement 'Ease of Doing Business' at JNPT, we thought of a transport solution in which technology-led Uber like model will result in faster movement of cargo from the port. For this, a very transparent process of tendering and



selecting transport operators for five routes were conducted. There is some misunderstanding among a section of transporters who fear that their business will get impacted adversely. However, a dispassionate view would suggest that all transport operators can be absorbed by the four logistics companies selected to transport the cargo.

In fact, more and more transport operators are aligning with these four operators. The new transport solution is in the larger interest of trade and the economy as the process will help smooth, controlled and seamless movement of cargo from the port to the destination. Both import and export community will benefit in the long run and thus contribute to the growth of the economy. JNPT is trying to bring a change and as always it takes time and understanding for the success of a new system and JNPT is confident of making the new process a success.

- Q: While, it is true that reducing dwell time at ports is important to support EXIM trade, the move to have Direct Port Delivery is being seen as a dent on CFS operations. How do you look at the situation? Can we reach an equilibrium?
- **A:** JNPT and the Shipping Ministry is trying to take all stakeholders into confidence and implement the DPD which is a trade-friendly initiative resulting in significant reduction in cost and time. The CFS requirement will be there to cater to less than container load (LCL) cargo. CFS operations along with warehousing demand too will grow as the capacity addition in JNPT to 10 million TEUs will naturally result in more demand for all logistics support at the port.
- Q: Are you suggesting that CFS operators need to tweak their business models to adapt to the changing business environment? Are we staring at a shift in the way goods are shipped and transported in India?

A: Business dynamics keep changing and it is natural that if a system has to protect itself from becoming redundant or obsolete, it should keep changing itself to meet the new challenges. Logistics costs in India are comparatively higher by global standards and there is an immediate need to bring logistics costs down to make the economy more efficient and compete at the global level. In that sense, there is a need to change the way we are doing business.

> "JNPT is currently developing dry ports in Wardha, Jalgaon, Nashik and Sangli in Maharashtra which will boost the local manufacturing units and agriculture."

- Q: It has been reported that dry ports, CFSs and others facilities might see a cut in their numbers. Do you stand by the move? What can be an alternate move for it?
- A: JNPT is setting up four new dry ports to connect the hinterland to the port and also increase the supply of cargo from different parts of the country. JNPT is currently developing dry ports in Wardha, Jalgaon, Nashik and Sangli in Maharashtra which will boost the local manufacturing units and agriculture. CFSs volume too will grow as the volume of business itself grows. Through this initiative, the port is increasing container cargo volume in India. Such increased volume will create enough opportunities for all stakeholders.
- Q: How are things going forward with the six firms that won plots at JNPT SEZ? What is the present status of the economic zone?
- A: The JNPT-SEZ being developed on 277 hectare land has started attracting sizable investments and already 6 firms have won plots. Tendering process for another 15-20 plots of land is currently in progress and we expect good response from the manufacturing sector. JNPT is building the necessary infrastructure and it is expected that global firms and large corporate groups from India too will find the facilities attractive to set up base at the SEZ. ■





MULTI-MODAL TERMINAL AT HALDIA: A DREAM TO BE REALISED SOON

IWAI's Rs. 517-crore project is soon to emerge as a major convergence point on the logistics map of the country.

The biggest multi-modal terminal on the National Waterway-I (river Ganga) is soon to become a reality. The construction of the Rs. 517-crore Haldia terminal project kicked off in November 2017 after CRZ clearance was accorded by the Ministry of Environment, Forests & Climate Change. The progress so far is nearly 10 per cent. The shipping and roadways segment work of the terminal is slated to be completed by December 2019. The railways component is expected to be accomplished in 2020.

Spread over 61 acres of land at the Haldia Dock Complex, the terminal has been designed with comprehensive facilities for multi-modal port operations. These include berthing space for four vessels, stockyard for storing, belt conveyor system with fixed hoppers, barge loader, shore protection works, roads, ramps and parking area, and other terminal installations. The cargo handling capacity of the terminal is 3.18 million tonnes per annum.

The Haldia terminal has the highest capacity among the three multi-modal terminals being constructed on the National Waterway-1. Its construction and the overall development of NW-1 will bring about a visible change in West Bengal by stimulating business and spurring employment. It will also provide the much-needed connectivity to the hinterland. The multi-modal terminal will play a crucial role in the distribution of domestic products to various markets along the NW-1 and also cater to the exports markets.

The multi-modal terminal at Haldia and the overall development of NW-1 will bring about a visible change in West Bengal by stimulating business and spurring employment.

Due to its strategic location, the multi-modal terminal at Haldia will be a gateway for the sea-bound traffic coming from UP, Bihar and Jharkhand, moving to the North-East region through the Indo-Bangladesh Protocol Route and the coastal traffic destined for the ports on the East





Coast. The terminal will be ideal for lighterage operations and also have the advantage of the rail network catering to the Haldia Dock System.

A stimulus to trade and commerce

The Haldia multi-modal terminal is expected to become a major hub for the transportation of cargo for West Bengal and the North-East region. This emerges from the fact that two years ago when the project was only at the blueprint stage, the logistics industry committed 5.92 million tonnes per annum of cargo volume.

Working as a junction for a switchover from one mode of transport to another, the multimodal terminal will provide the much-needed alternative transport facilities, connecting goods to markets and producers to buyers. The terminal will be a transit point for major shipments such as coal, fly ash, chemicals, petroleum and gas, construction materials, fertilizers and edible items.

Changing lives, not just logistics

The significance of the Haldia multimodal terminal is not just about the development of logistics. As the National Waterway connects small, obscure places in the hinterland along its route to towns and cities, it creates immense opportunities for small trades, local crafts and business to reach out on a larger map. The multi-modal terminal at Haldia will play a crucial role as a transit point for the transportation of the local produce, crafts and wares – providing a fillip to trade and spurring opportunities of livelihood.

An integral part of a larger objective

The Haldia multi-modal terminal is an important cog in the development of the National Waterway-1 from Varanasi to Haldia, covering a distance of 1390 km. The NW-1 is being developed under the Jal Marg Vikas Project of IWAI, with the technical and financial assistance of World Bank at an estimated cost of Rs. 5369 crore. It will enable commercial navigation of vessels with capacity of 1500-2,000 DWT.

The National Waterway-1 is a project of national significance, passing through Uttar Pradesh, Bihar, Jharkhand and West Bengal, serving the major cities of Haldia, Howrah, Kolkata, Bhagalpur, Patna, Ghazipur and Varanasi and their industrial hinterland including several industries located in the Ganga basin. The rail and road corridors in the region are heavily saturated. The development of NW-1 will provide an alternative, economical and ecofriendly mode of transport.

In terms of employment opportunities, Jal Marg Vikas Project is expected to create 56,000 jobs in West Bengal.



THREE MAJOR PORTS TO TAKE UP SEA WATER RECYCLING

A pioneering initiative, the sea water recycling will meet a large part of the need for drinking water in the port areas.

In view of the growing demand for drinking water, three Major Ports – Paradip, Kamarajar and Chidambarnar Ports – are all set to pioneer recycling and desalination of sea water. The move has come after a decision was made at a meeting of Ports' Chairmen, chaired by Hon'ble Minister of Shipping, Shri Nitin Gadkari in April, 2018.

Speaking about the objective of the initiative, the Union Minister said that the desalination plant at ports should be used for meeting the potable water needs of ports as well as the neighbouring community. The initiative will have a significant contribution towards meeting the need for potable water in the towns and areas near the three ports.

Desalination plants are proposed to be installed at Paradip (Odisha), Kamarajar (Ennore, Tamil Nadu) and V.O. Chidambaranar (Thoothukudi, Tamil Nadu) ports with installed capacities of 10 Million Litre Per Day (MLD), 1 MLD and 5 MLD respectively.

Consultants are being appointed by the respective ports to prepare feasibility reports for the proposed desalination plants. The estimates of the cost involved in setting up of the plants will be known after the feasibility reports are available. With the setting up of the proposed plants, the demand for potable water at the 3 ports and the nearby villages will also be met. treatment technology. It has been proposed that the process will use containerized reverse osmosis-based plants which can reduce the cost of producing desalinated water.

"The desalination plant at ports should be used for meeting the potable water needs of ports as well as the neighboring community."

- Shri Nitin Gadkari

The Union Minister also said that efforts should be made to extract methane, carbon-dioxide and bio-CNG from sea water. He has also directed the port chairmen to explore feasibility about using treated sewage water for cleaning rail coaches at different railway stations and nearby power plants.

The issue of power cost which has a major contribution to the overall desalination cost was analysed during the meeting. Shri Gadkari suggested that cheaper power sourcing options like renewable energy through windmills and solar farms should be explored. This would help in bringing down the cost of producing desalinated water by about 20 per cent. Desalination benefit may vary from port to port, depending upon the municipal water purchase price and energy tariffs.

The recycling of sea water is going to provide a new answer



to a major need.

The pioneering move will be backed by advanced water

EVENTSDETOUR

MOU INKED FOR OCCUPATIONAL SAFETY AND HEALTH OF SHIP RECYCLING WORKERS

Gujarat Maritime Board and DGFASLI sign an important MoU to ensure occupational safety and health conditions in the Alang-Sosiya ship recycling yards.

Ship recycling is one of the most hazardous industries that exposes workers to risks of accidents and health hazards. Many accidents occur because of unskilled workers engaged in the work. In order to reduce the occurrence of work-related accidents and diseases in ship-breaking yards in Alang, Bhavanagar (Gujarat), an MoU was signed on 11 July 2018 between Gujarat Maritime Board (GMB) and Directorate General of Factory Advice Services and Labour Institutes (DGFASLI) in the presence of Hon'ble Minister of Labour (Independent Charge), Shri Santosh Gangwar and Hon'ble Minister of State, Shipping, Shri Mansukh Lal Mandaviya.

While GMB is responsible for managing smooth functioning of Alang- Sosiya Ship Recycling Yard, DGFASLI is an apex organization under the Ministry of Labour and Employment, responsible for ensuring occupational safety and health in all establishments. The memorandum will work as the overall framework for collaboration in the area of occupational safety and health (OSH) at Alang-Sosiya Ship Recycling Yard. The main objective behind signing of the MoU is to work jointly towards ensuring better safety and working conditions through the exchange of experiences, joint scientific research, training and field visits.

The Alang-Sosiya Ship Recycling Yard is the world's largest yard of its kind, which employs an average of 15,000 to



Signing of MoU between GMB and DGFASLI

25,000 workers at a time. Occupational safety and health of workers is a key focus area for GMB and it has provided training to 1.3 lakh workers in the last 15 years.

To further provide occupational safety and health, Ministry of Shipping has sanctioned Rs. 30 crore under the Sagarmala programme to enhance training to the workers of Alang. The course curriculum for training has been reviewed and revised by DGFASLI.

The training started from January 2017 and more than 6,317 workers have been trained till June 2018. A 3-day refresher course has also been initiated to provide improved training to the workers trained earlier. GMB has been working to improve the lives of workers in Alang and carries out civil and municipal functions of the entire ship recycling yard. It has provided land and a recurring financial support of Rs.22 lakh per year to the Red Cross Hospital in Alang. It is also in the process of setting up a hospital, which will be operated by ESIC. GMB has constructed dormitory residential accommodation for 1008 workers at a cost of Rs. 24 crore. It has also constructed 7 sanitary blocks and 2 more are under construction.

GMB is also engaged in various welfare activities costing over Rs.40 lakh every year, catering to workers and their families round the year.





AFTER MUMBAI, CEMS HIGH-TECH LABS IN VISAKHAPATNAM

Centre of Excellence in Maritime & Shipbuilding (CEMS) is in a spree of launching its labs and has just announced its second.

Just after the launch of its labs in Mumbai, Centre of Excellence in Maritime & Shipbuilding (CEMS), a startup in skill development in maritime and shipbuilding sector, has announced the opening of its labs in Visakhapatnam.

A seminar was held on 13 July 2018 in Visakhapatnam to provide various stakeholders a glimpse of the facilities in the labs as well as to begin the process of training. The seminar has a large participation and was attended by a number of industry professionals including CMD of Hindustan Shipyard Limited, CMD of Goa Shipyard Limited, officials from Ministry of Shipping, officials from the Government of Andhra Pradesh, high-ranking naval officers as well as academia and students from nearby colleges and polytechnic and engineering institutes. A short tour to the facilities was also arranged in the campus for the participants.

Speaking on the occasion Shri Kailash Agrawal, Joint Secretary, Sagarmala said: "Centre of Excellence in Maritime and Shipbuilding (CEMS) is a key initiative of the Sagarmala programme for improved skill development in ship-building and ship repair. It will provide industry-relevant employable skills to students in the port and maritime sector. This initiative will further boost the 'Make in India' and 'Skill India' efforts in the maritime sector."

CEMS is promoted by Indian Register of Shipping (IRClass) in association with Siemens, with support from Sagarmala. Its Visakhapatnam campus is located in the Indian Maritime University (IMU) premises.

CEMS has planned 18 labs for its Visakhapatnam campus, out of which 6 labs are ready and will soon be operational. The construction of 12 labs is underway at a rapid pace and expected to be completed by end-September, 2018. The labs will be fully equipped with the latest machinery including mechatronics and robotics.





SAGARMALA GETS PLATINUM

Sagarmala Programme receives the Platinum Award for its initiatives in infrastructure sector at the 52nd Skoch Summit.

For its numerous innovative and effective initiatives in the infrastructure sector, the Sagarmala Programme received the 'Platinum Award' at the recently concluded 52nd Skoch Summit 2018 in New Delhi. The programme also got the recognition of the 'Order of Merit'. maritime trade route. The Union Cabinet chaired by the Prime Minister Shri Narendra Modi had given its 'in-principle' approval for the concept and institutional framework of Sagarmala Programme on 25 May 2015. The National Perspective Plan (NPP) was released by the Hon'ble Prime Minister Shri Narendra Modi during Under the Sagarmala Programme, more than 576 projects with an estimated cost of Rs. 8.7 lakh crore have been identified for implementation over 20 years. Developments have been chalked out around port modernization and new port development, enhancing connectivity of ports, industrialization



Shri Nitin Gadkari, Hon'ble Minister of Shipping and Shri Gopal Krishna, Secretary (Shipping) holding the Skoch Award

The award was received by Shri Kailash Kumar Aggarwal, Joint Secretary (Sagarmala) on behalf of the Ministry of Shipping from Shri Sameer Kochar, Chairman of the Skoch Group. The 'Order of Merit' was received by Shri Abhishek Chandra, Deputy Secretary (Sagarmala). Shri Gopal Krishna, Secretary, Ministry of Shipping was the chief guest at the valedictory session of the awards ceremony.

Sagarmala is the flagship programme of the Ministry of Shipping for portled-development of the country through harnessing India's 7,500 km long coastline, 14,500 km of potentially navigable waterways and strategic location of India on key international the inaugural Maritime India Summit in Mumbai in April 2016.

The Sagarmala programme hinges on four pillars – port modernization, port connectivity, port-linked industrialization and coastal community development.

The programme aims to double the share of domestic waterways – both inland and coastal – in the modal-mix, generate logistics cost savings of Rs. 35,000-40,000 crore per annum, boost merchandize exports by USD 110 billion and enable the creation of 1 crore new jobs, including 40 lakh direct jobs in the next 10 years. linked to ports and coastal community development. Out of the 576 projects identified, 69 projects worth over Rs. 13,500 crore have already been completed and another 424 projects worth over Rs. 4.1 lakh crore are under various stages of implementation and development. The capacities of Major Ports have increased from 965 MT to 1451 MT in 2017-18 through various initiatives under the Sagarmala Programm.

The Sagarmala Programme characterises one of the most diversified and multi-dimensional initiatives that India has embarked upon in the recent times.





INDIA SEEKS TO BE A MAJOR TALENT SOURCE IN PORT AND MARITIME SECTOR

While skill development in port and maritime promises coastal prosperity, it enables India to emerge as a major source of skilled people in the sector globally.

"Skill development in the port and maritime sector is an opportunity to improve our coastal areas, usher in port-led prosperity and provide the world with skilled youth. We are one of the leading suppliers of seafarers in the world and now want to be the leading supplier for all talent in the port and maritime sector," said Shri Gopal Krishna, Secretary (Shipping), addressing a workshop on 'Skill Development in the Port and Maritime Sector'.

The workshop was organised by the Ministry of Shipping in association with Deen Dayal Upadhyay Gramin Kaushal Yojana (DDU GKY) and Ministry of Rural Development on 8 June 2018 at India Habitat Centre, New Delhi. The one-day workshop was inaugurated by Secretary (Shipping), Shri Gopal Krishna and Shri Bishnu Pada Ray, Member of Parliament from Andaman and Nicobar.

On this occasion a testimonial booklet highlighting the success stories of trainees trained in Phase-1 of the Sagarmala-DDU GKY Convergence Program was released. Another important release was a detailed study report of the skill gap in 21 coastal districts of India.

"We are one of the leading suppliers of seafarers in the world and now want to be the leading supplier for all talents in the Port and Maritime sector,"

-Shri Gopal Krishna, Secretary (Shipping)

The workshop also highlighted various skill development initiatives undertaken by the Ministry of Shipping. Shri Bishnu Pada Ray lauded the efforts for skilling youth of the coastal districts and providing them with employment opportunities.

Mapping the need, bridging the skill gap

The Ministry of Shipping has completed skill gap studies of 21 coastal districts in eight states and three union territories – Maharashtra, Gujarat, Andhra Pradesh, Karnataka, Odisha, West Bengal, Tamil Nadu, Kerala, Puducherry, Andaman & Nicobar Islands and Lakshadweep and currently its programme implementation is underway. In course of



Shri Bishnu Pada Ray, Hon'ble MP of Andaman & Nicobar, at the inauguration of the Skill Development Workshop in New Delhi

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implementation, a training programme on the module of 500 students per year per district is being taken up for three years under the Sagarmala DDU GKY (MoRD) initiative.

Initially, in the first phase, 1917 students have been trained, 2028 are going through training and 1128 have been placed. As of now, 92 students are under training in Odisha.

Phase-1 of Skill Development Programme

Training & Placement	No. of Students
Undergoing training	2,028
Completed training	1,917
Placed in jobs	1,128

Widening the scope of skill development

Another stride in the direction of skill development by the Ministry is Centre of Excellence in Maritime and Shipbuilding (CEMS), which is being set up in association with Siemens and Indian Register of Shipping (IRS) under the Ministry's flagship Sagarmala Programme. Conceived at an outlay of Rs. 766 crore, CEMS will have campuses at Visakhapatnam and Mumbai and will train 10,512 students every year.

The Centre aims to grow into an international nodal institution for skill development in the port and maritime sector in South Asia, attracting students from neighboring countries like Sri Lanka, Bangladesh, Thailand, Malaysia and Indonesia.

Besides, for maritime logistics, a multi-skill Development Centre for Maritime Logistics is being set up in Uran near JNPT, Mumbai. The Centre in collaboration with the Ministry of Skill Development and Entrepreneurship will provide for entrylevel skilled workforce for maritime logistics.

The Workshop turned out to be a plateform for convergence of ideas when employers, training partners and government institutions engaged in the port and maritime sector shared their mind.

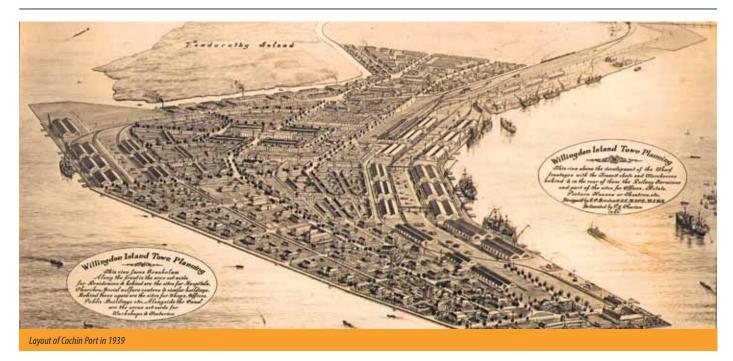


Release of the testimonial booklet: (L to R) Shri Sharda Prasad, Advisor; Shri Bishnu Pada Ray, Hon'ble MP, A&N; Shri Gopal Krishna, Secretary (Shipping); Shri Kailash Aggarwal, JS (Sagarmala) and Shri Anand Pandey, Director, MoRD



THE SPICE COAST OF THE MEDIEVAL WORLD

A whip of breeze laced with the fragrance of cardamom reminds of the splendour of the spice coast that Cochin once was.



The word 'Kochi' is derived from 'Kaci', which means 'harbour'. The city of Kochi takes its name from its fabled harbour. According to other accounts, merchants from the court of the Chinese ruler Kublai Khan came to the harbour for trade and settled there. They gave the name of 'Kochi' to the locality where they inhabited. The peculiar Chinese fishing nets which can be seen at the harbour, the only place outside China, can be a testimony to the heavy Chinese concentration that the harbour probably had in the past.

The subsequent influx of Arabs, British, Chinese, Dutch, Italians and Portuguese to the harbour gradually turned it into a bustling centre of commercial activity, connecting the mainland of Indian peninsula to the rest of the world. For its prominence and prosperity, the harbour owes a lot to great travellers, merchants and engineers, like Fa Hien, Vasco da Gama, Sir Robert Bristow and many others who came to its shores.

From one glorious harbour to another

The history of the harbour of Cochin is lost in obscurity except for what remains in legendary records. Foreign travellers and geographers like Pliny, Ptolemy, Marco Polo, Ibn Battuta and other early visitors to the land did not mention anything about the importance of the harbour, although they provided vivid descriptions of Cape Comorin (Kanyakumari), Kallada, Cranganore (Kodungallur) and other places.

Cochin emerged as a significant harbour on the world trading routes only after 1340 AD when the famous harbour of Muziris (Kodungallur) was devastated by a massive flood in the river Periyar. While the old port was destroyed, the forces of nature created a new harbour, which eventually came to be called Kochi. The Muzris had been a key port for trade between the southern India and Persia, Egypt, Yemen, Phoenicia, Greece and Rome. With its destruction, the merchant ships engaged in coastal trade and long-distance commerce began to frequent the new harbour.

The origin of Cochin port began a new calendar era

"The geographical changes which affected Cochin, Vypin and Cranganore (Kodungallur) were commemorated by the 'Puthu Vaippu Era' from the date of Vypin's formation in 1341 AD. This new era was used mainly by the St. Thomas Christians of Njarrakkai church in the Vypin island."

> -'History of Kerala' K. P. Padmanabaha Menon

Soon, Cochin emerged into a flourishing harbour on the trade route in the Arabian Sea.

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The fabled entrepot on the spice route

By the turn of the 14th century, the Cochin port grew into one of the most sought-after destinations in the medieval world. The harbour was thronged by the merchants from the islands of Indonesia, Malaysia and faroff countries of Persia, Arabia, China, Egypt, Phoenicia, Greece and Rome, who came in search of famed spices, fragrances and herbal medicines.

Ships loaded with black pepper, cardamom, cinnamon, cloves and numerous other varieties of spices sailed from the harbour. Pearls, diamonds, sapphires, ivory, silk and muslin were other important commodities that used to reach other capitals and commercial centres. The Italian traveller, Marco Polo mentions that a ship was measured by the number of pepper baskets contained in it. Among spices, pepper always held the first place and was declared passion of the 'Yavanas' (Romans).

The commercial activities at the famed harbour were so vibrant that it attracted emissaries and missions from various capitals, who came to build trade links and strengthen commercial ties with the rulers of the region. Zheng He, the envoy of the Ming Dynasty's emperor, remembered in history for his ambitious sea expeditions, came to the harbour of Cochin four times between 1407 and 1422 AD. Fei Hsin, one of the members of the Zheng He's expedition, writes, "the commodities brought from China for trade in Cochin included coloured satins, white silk, blue and white porcelain-ware, gold and silver."

The port city of Kochi marks the first European capital in India

On May 20, 1498 AD, Vasco da Gama landed on the Kappad beach, near Kozhikode (Kerala). But it was the port city of Kochi that saw the first Portuguese settlement. Contrary to the notion, it is not Goa or Kolkata but Kochi which became the first European capital in India. The villa where Vasco da Gama stayed as the Portuguese viceroy stands on Rose Street at Fort Kochi. More than five centuries old, it is the oldest European monument in India.

The Chinese ships, in return, carried back spices like pepper and ginger as well as precious substances as ivory, pearl and coral. Ma Huan, the scribe in the mission, accounts that ships from Arabia and Persia used to cast their anchors off the port frequently.

The whispers of a glorious past float off the harbour of Cochin, reminiscent of the arrival of quaint ships from distant land, the heady fragrance of spices arising from myriad boats moored to the shores, and the cacophony of foreign voices mixing with the noises of the local sailors and merchants. For centuries, this fabled harbour of Cochin, redolent of fragrant spices, had mesmerised seafarers. And like all fantastic legends, it lured merchants, traders and adventurers to come to the soar in search of fortune.

The mute witness to a chequered past

As fame of the port reached beyond the seas and the tales of its wealth and opulence became the subject of conversation in other centres of commerce, they attracted not only merchants but also invaders.

In the year 1500 AD, the Portuguese Admiral Pedro Álvares Cabral landed at the shores of Cochin in his warship. He had been repelled by the army of the Calicut king. The king of Kochi,





a rival of Calicut, welcomed his guests. Both had a common enemy, and a treaty was signed that promised mutual cooperation in war against Calicut. The Portuguese planned a wellstudied battle strategy, but when they were face to face with a 6,000-strong army of Zamorins of Calicut, the admiral retreated in panic. Another captain, João da Nova, was sent in place of Cabral. But, he too faltered at the sight of the Zamorins.

The consecutive retreats made the King of Portugal indignant and he sent Vasco da Gama.

In a mood of vengeance for the two previous defeats, he along with the army of the Kochi king launched a ferocious offensive against Calicut. In 1504, the Battle of Cochin decided the course of history. The Zamorins of Cochin had a fatal defeat at the hands of the king of Kochi and his Portuguese allies. And that changed the destiny of the Kochi and the entire Malabar region.

The Portuguese became the overlords of the harbours and the water of the Arabian Sea.

The Portuguese rule was followed by that of the Dutch. The Dutch invasion

began around 1653 and by 1663 they emerged victorious over the Portuguese. In 1673, the Dutch were defeated by Hyder Ali, the great rulers of Mysore. In course of time, when the entire India went under the Union Jack, Kochi too became a part of the British Empire in 1814.

The Cochin port is a mute witness to numerous battles fought for the control of its harbour and the water of Arabian Sea. While it basks in its resplendent glory, it remembers the battle and blood, fire and fury that mark its history.

A modern port from the embryo of history

The changing of times increased the volume of traffic at the old harbour. The 19th and 20th centuries witnessed a rapid growth in trading activities between Cochin and other ports across the sea. In the early 1920s, the ships coming to Cochin used to berth in the outer seas, and it was small vessels that carried out the loading and unloading of the cargo. It caused a lot of inconvenience as well as a threat to ships anchored in the sea.

The need of a modern port was first realised by Lord Willingdon, the British

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governor of Madras Province. For the construction of port that can measure up to the increased need, the first name that came to his mind was that of Sir Robert Bristow, a leading British harbor engineer with extensive experience with maintenance of the Suez Canal.

Ever thought that the Cochin Port was built for World War-II?

The strategic importance of the Cochin harbour in view of the World Wars was the immediate reason for the construction of the port. During the World War-II, the port was taken over by the Royal Navy to accommodate military cruisers and war ships. It was returned to civil authorities on 19 May, 1945.

It took the ingenuous expertise of Robert Bristow and several years to transform the old harbour of Cochin into a modern port that can meet the needs of the changed times. The work started with the most formidable challenge of removing a rock-like sand bar that stood across the opening of the Cochin backwaters into the sea. With a dredger that ran for at least 20 hours a day for the next two years, the sand bar was removed. An approach



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channel was also cut, connecting the port with the open sea. The steamship 'Padma' entered the new Cochin Port on May 26, 1928. The modern port of Cochin had come into being. In a span of 21 years, Sir Robert Bristow had transformed Cochin from a medieval, almost-obsolete harbour to an extensive modern port, with the safest inner harbour.

Talking proudly about his achievement, Sir Robert Bristow spoke to BBC on 11th August, 1935, "I live on a large Island made from the bottom of the sea. It is called Willingdon Island, after the present Viceroy of India. From the upper floor of my house, I look down on the finest harbour in the East." The 'Willingdon Island' was artificially created with the mud sledged out for the harbour construction.

When India attained independence, the Cochin port was taken over by the government. After seventeen years, in 1964, the operation of the port was transferred to a Board of Trustees under the Major Port Trusts Act. The port was listed among the 12 Major Ports.

The Cochin port has come a long way since the times when a fleet of dhows lined its backwater entrance after the ancient Muziris harbour had closed down. The spice coast of the medieval era has transformed into a major international trans-shipment terminal that can vie with the finest in the world, equipped with the technology and sophistication that make all the difference in today's marine operations.

An all-weather natural port, located strategically close to the busiest international sea routes, the Cochin port today handles 13.5 million tonnes of cargo and receives 1,100 vessels at its dock per annum. The port has a major liquid terminal for the storage and handling of bulk liquids, and a wellequipped bulk terminal with capability to discharge bulk commodities directly from vessels to railcars and trucks. The International Container Trans-shipment Terminal (ICTT), part of the Cochin Port, is the largest container trans-shipment facility in India. Over the years, the port has emerged as a major stop-over for cruise liners from across the world as well as yachts participating in the prestigious Volvo Ocean Race.

The Cochin Port today is indeed the 'Queen of the Arabian Sea' as prophesied by the first finance minister of independent India, Diwan of Cochin Sir R.K. Shanmugham Chetty who coined that expression more than 75 years ago. ■

Milestones in the history of Cochin Port

1341: The ancient port of Kodungallur (Muziris) devastated by a massive flood; the natural harbour of Cochin created

1500 : Arrival of the Portuguese admiral, Pedro Álvares Cabral at Cochin

1503-1662 : The rule of the Portuguese as the controlling power of Cochin

1663-1773 : Defeat of the Portuguese that establishes the reign of the Dutch for a centuary

1773 : Annexation of Cochin by Hyder Ali for a brief interlude

1814-1947 : Transfer of the port city of Cochin to the British according to the Anglo-Dutch Treaty, beginning the long rule of the Union Jack

1920 : Arrival of Sir Robert Bristow who transforms the ancient harbour into a modern port

1930 : The port thrown open for vessels up to 30 ft. draft.

1936 : Cochin declared a Major Port

1939 : Commissioning of Mattancherry Wharf

1955 : Construction of Ernakulam Wharf inaugurated

1964 : Commissioning of Ernakulam Wharf





THE SAGARMALA POST

(A Newsletter on Sagarmala Programme by Ministry of Shipping)

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