



INTERVIEW
Stéphane Raison
CEO, HAROPA

SECTOR FOCUS: ALUMINIUM
**Coal Supply is
The Lifeline**

INTERNATIONAL TRADE
**The Ascendancy of Rupee for
International Trade**



INTERVIEW
Girish Surpur
Director - NLDL

south asia's premier maritime business magazine

maritime gateway

APR-JUN 2023

WWW.MARITIMEGATEWAY.COM

RNI NO: TELENG/2009/30633

DATE OF PUBLICATION:05/05/2023

₹100



**HEADING TOWARDS
THE 10 MILLION TEU CLUB**

SANJAY SETHI
IAS, CHAIRMAN, JNPA



INLAND WATERWAYS REGAINING THE LOST GLORY

Waterways once formed the mainstream mode of logistics for the South Asian countries, but lost their significance over time as the other modes gained prominence. Efforts are in progress to revive this low-cost and eco-friendly means of transport. It's just a matter of time when these mighty water bodies regain their lost glory

Your business, our passion.

Our constant further development serves the goal of being able to handle your cargo even more efficiently in the future.

www.liebherr.com

LIEBHERR

Maritime cranes





CAN INDIA BECOME THE NEXT GLOBAL FACTORY?



The Chinese mainland and Hong Kong's share of US exports has largely been taken by Vietnam, India, Taiwan and Thailand.

It was a sunshine moment for the logistics industry when Prime Minister Narendra Modi mentioned the term "Supply Chain" in his speech two years ago, as the world was coming to terms with COVID. The logistics industry which worked behind-the-scene for decades had just received its due share of limelight. "In order to build a developed India, the country is focussing on four pillars of infrastructure, investment, innovation, and inclusion. Today, the entire world is reposing its faith in India, and we are being looked up to as a country that can bring stability to the global supply chain," Modi said.

Today India has climbed up six places in the World Bank's Logistic Performance Index 2023, as investments in soft and hard infrastructure helped the country improve its port performance. India is now ranked 38 in the 139 countries index, up from 44 in 2018. With a port-based development approach, the government has invested in trade-related soft and hard infrastructure connecting port gateways on both coasts to the economic poles in the hinterland. A slew of initiatives have been instrumental in achieving this feat such as the National Logistics Policy, PM Gati Shakti Plan, Sagarmala, the Unified Logistics Interface Platform and of course the Dedicated Freight Corridors. Last Mile delivery has improved as India has more developed highways than ever before. Waterways are being revived to reach the landlocked parts of the country.

So what has actually changed? Various modes of transport which were earlier being developed in isolation are now being used in combination, bringing about multimodalism in its true sense. This is particularly true in the case of north-eastern states. How is it going to help?

According to the annual Re-shoring Index report by management consulting firm Kearney, China's share in US imports continued to decline even though US imports of manufactured goods from the 14 Asian LCCs grew 11% in 2022 to more than \$1 trillion. The Chinese mainland and Hong Kong's share of US exports was largely taken by Vietnam, India, Taiwan and Thailand. Asian LCCs include (the Chinese mainland, Hong Kong, Taiwan, India, Vietnam, Thailand, Malaysia, Indonesia, the Philippines, Singapore, Cambodia, Pakistan, Bangladesh and Sri Lanka.)

There has been a shift of manufacturing away from the Chinese mainland and Hong Kong, with many companies adapting their supply chains to reduce dependence on the nation due to concerns over intellectual property, tariffs, geopolitical tensions and supply chain resilience.

With a robust logistics infrastructure in place, here is India's chance to emerge as the next global factory.

R Ramprasad
Editor-in-Chief and Publisher
ramprasad@gatewaymedia.in

maritime gateway

CONNECT WITH MG



NOW YOU CAN READ YOUR FAVORITE MAGAZINE ON THE MOVE



DOWNLOAD MAGZTER APP FROM ANDROID & APPLE STORE



FOLLOW US ON [twitter](#) [@MARITIMEGATEWAY](#)

EDITORIAL ADVISORY BOARD

SABYASACHI HAJARA

FORMER CHAIRMAN, SCI
CHAIRMAN EDITORIAL ADVISORY BOARD

BILL SMART

CHIEF EXECUTIVE, BENGAL TIGER LINES

JULIAN MICHAEL BEVIS

FORMER SENIOR DIRECTOR,
GROUP RELATIONS, SOUTH ASIA
A.P.MOLLER-MAERSK

CAPT DEEPAK TEWARI

CHAIRMAN, CONTAINER SHIPPING LINES
ASSOCIATION (CSLA)

ADARSH HEGDE

JOINT MANAGING DIRECTOR
ALLCARGO LOGISTICS

P JAIRAJ KUMAR

CHAIRMAN & MD
OCEAN SPARKLE LIMITED

SHARDUL THACKER

PARTNER, MULLA & MULLA &
CRAIGIE BLUNT & CAROE

DHRUV KOTAK

MANAGING DIRECTOR, JM BAXI GROUP

MANISH SAIGAL

MD, ALVAREZ & MARSAL

JASJIT SETHI

CEO, TCI SUPPLY CHAIN SOLUTION

CAPT DINESH GAUTAMA

PRESIDENT, NAVKAR CORPORATION
LIMITED

CAPT SANJEEV RISHI

ADVISOR, WORLDS WINDOW
INFRASTRUCTURE & LOGISTICS PVT LTD

NAVIN PASSEY

FORMER MANAGING DIRECTOR, WALLEM
SHIPMANAGEMENT (INDIA) PVT LTD

EDITOR AND PUBLISHER

R RAMPRASAD, ramprasad@gatewaymedia.in

ASSOCIATE EDITORS

OMER AHMED SIDDIQUI, omer@gatewaymedia.in
ASL NARASIMHA RAO, narasimharao@gatewaymedia.in

DESIGN CONSULTANT

VIJAY MASA, CREATIVE CLICKS

MANAGER - MARKETING & SALES NATIONAL & INTERNATIONAL

SATISH SHETTI, satish@gatewaymedia.in +91 99207 05534

ADMINISTRATION

KISHORE P, CHIEF MANAGER, GENERAL ADMINISTRATION
MADHUKAR, MANAGER, prmadhukar@gatewaymedia.in +91 93937 68383

DIGITAL MEDIA VINAY

FINANCE RAKESH U

Maritime Gateway is printed by R Ramprasad published by R Ramprasad on behalf of Gateway Media Pvt Ltd, D.No. 6-2-984, #407, 5th Floor, Pavani Plaza, Khairatabad, Hyderabad – 500 004, Telangana, India.

Printed at M/s PVB Printers, 11-5-418/A, Ground Floor, Skill Adobe Apartment, Redhills, Lakdikapool, Hyderabad - 500004. Published at Gateway Media Pvt Ltd, D.No. 6-2-984, #407, 5th Floor, Pavani Plaza, Khairatabad, Hyderabad – 500 004, Telangana, India.

REGD. OFFICE: D.No. 6-2-984, #407, 5th Floor, Pavani Plaza, Khairatabad, Hyderabad – 500 004, Telangana, India.

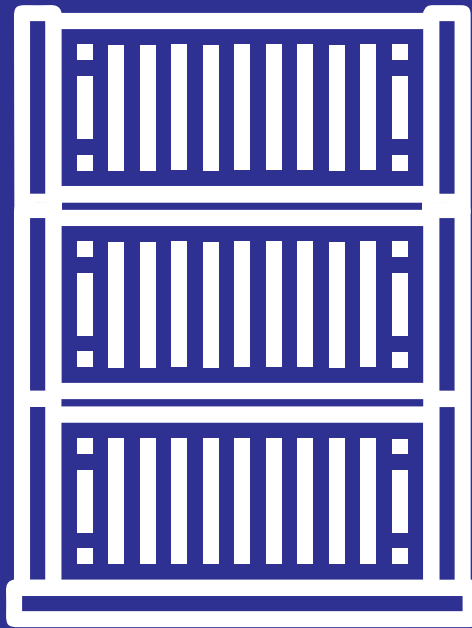
CIN: U74900TG2007PTC054344

EDITOR: R Ramprasad

Views expressed in the articles are those of the writer(s) and may not be shared by the editor or members of the editorial board. Unsolicited material will not be returned.

COPYRIGHT: No material published here should be reproduced in any form without prior written permission from Gateway Media.

FEEDBACK: Readers are advised to send all feedback and comments to editor@gatewaymedia.in



We are stepping up!

2025 goal :

+ 11% in maritime traffic for the container and logistics sector.

First Northern European port reached by imports and last by exports, HAROPA PORT serves France's largest consumer area and Europe's second largest. Via its four multimodal terminals - Le Havre, Rouen, Gennevilliers and Bonneuil-sur-Marne - your goods are distributed in containers or swap bodies for a more fluid and ecological supply chain. Connected to all the continents with its first-class maritime offer and providing an intricate port network for pre and post routing along the Seine River axis, HAROPA PORT, first French port, generates over 110Mt in maritime and river activity every year, and 160 000 jobs.



16
RAIL FREIGHT

Can 45% of domestic cargo be brought to the tracks?

Clearly, Indian Railways is aggressively surging ahead towards a vision to grab 45% of the domestic freight share by 2030.



19
INTERNATIONAL TRADE

The ascendancy of Rupee for International trade

There is a marked trend among nations to free themselves from the yoke of the Dollar hegemony.



22
SHIPPING EMISSIONS

The Green and Digital Corridors New Highways of the Ocean

Green corridors function as 'special economic zones at sea'. They have nodal points for fuel production, and ship operations.

25
LIQUID BULK

The sword of sanctions

The flow of Russian oil has changed its course towards Asia. The first wave of European sanctions appears short in its effort to curb Russian energy exports.



30
CONTAINER LEASING

Liner Container and the Leasing Industry Shortage to Surplus to What exactly?

The effect of the now hastened attrition of the container fleet combined with the effective reduction in slot capacity because of the MARPOL amendments...

28
ALUMINIUM
Coal supply is the lifeline

On one side the domestic aluminium sector is struggling with inadequate supply of coal and high logistics cost, on the other side...



14
Cover Story

Waterways once formed the mainstream mode of logistics for the South Asian countries, but lost their significance over time as the other modes gained prominence. Efforts are in progress to revive this low-cost and eco-friendly means of transport. It's just a matter of time when these mighty water bodies regain their lost glory

Interviews

15
Girish Surpur

GM-Logistics Business Unit,
NEC Corporation India Pvt Ltd &
Director-NLDSL



40
Stephane Raison
CEO, HAROPA



42
Sanjay Sethi, IAS
Chairman, JNPA



32
GREEN FUEL
Methanol moves into the mainstream of shipping's energy transition

Shipowners seeking options for decarbonization are choosing Methanol as a powerful solution for the short and long term, writes Chris Chatterton, The Methanol Institute.

35
LIGHT ENGINEERING
The next growth horse of Bangladesh economy

45
COMMODITY: MANGO

Maersk: Crossing a new frontier in the export of temperature sensitive cargo

हमारा लक्ष्य -
ग्राहक मूल्य सृजन

Our Ethos - Customer
Value Creation

BULK CEMENT HANDLING

CONCOR has come up with an effective solution for Transporting Bulk Cement through Regular Containers in Rail transport. With Rail being the mainstay of CONCOR's transportation plans & strategy, CONCOR developed cost effective, environmentally friendly bulk cement loading and unloading technology to utilise the most environment friendly rail transport.

CONTAINER AS WAREHOUSE

As there is huge demand for warehousing and in order to facilitate trade to have an economical warehousing space, CONCOR has offered its containers for use on a nominal charges. Using container as warehouse helps customers to get benefits of avoiding multiple handling, transportation, savings on time, money and quality of products, Spillage & Wastage are avoided, No fumigation at Customers godowns/warehouses. Cargo is stored in Containers.

INDIGENOUS CONTAINER MANUFACTURING

In line with Hon'ble Prime Minister Shri Narendra Modi ji's vision of Make in India and Atma Nirbhar Bharat, CONCOR floated an Expression of Interest (EoI) for prospective indigenous container manufacturers and has placed order to local Container manufacturers. This will help to overcome the shortage of containers, promote exports, increase employment & economic growth & saves on precious foreign exchange.

TOTAL LOGISTICS SOLUTIONS(TLS)

TLS is being provided & created in Multi Modal Logistics Parks across various strategic locations for containerized cargo of both EXIM and Domestic. TLS Advantages are Efficient rail transportation of containers, State of the art facilities, Massive warehousing capacity, Country-wide network, large fleet of containers, Fleet of Third party Container & Cargo Trucks for FLML (First Mile Last Mile Connectivity), Relationship with top-end customers & with various intermediaries in logistics.

Containers
MADE IN INDIA



Just imagine
the growth potential!

CONTAINER
MANUFACTURING
DEALING WITH
THE CONTAINER CRUNCH



भारतीय कंटेनर निगम लिमिटेड, कॉनकॉर भवन, सी-3,
मथुरा रोड, नई दिल्ली - 110076

Container Corporation of India Ltd.
CONCOR Bhawan, C-3, Mathura Road,
Opposite Apollo Hospital, New Delhi - 110076

Follow us on Social Media

- @OfficialCONCOR
- UCsa4y9J0e-b0w8W3J-Aylkw
- @concor_india
- co.pro@concorindia.com

INLAND WATERWAYS REGAINING THE LOST GLORY

Waterways once formed the mainstream mode of logistics for the South Asian countries, but lost their significance over time as the other modes gained prominence. Efforts are in progress to revive this low-cost and eco-friendly means of transport. It's just a matter of time when these mighty water bodies regain their lost glory



A

bout half a century ago the river system in eastern part of South Asia used to move one-third of the freight traffic in this region. The rivers Ganga, Padma and Meghna have been the major centers of trade and culture in the region. India and Bangladesh share

about 54 common rivers – the most among any two countries in the world. Some of these river connections were disturbed during the colonial era and immediately after the partitions. In fact, during the pre-independence era waterways were the principal mode of transport for the north-eastern states. Chittagong Port was known as the tea port of Assam. After the partition, the trade volumes moving through waterways declined as more focus was on developing roadways and railways.

Thus, gradually the share of waterways has come down to about 2%.

But the government is determined to restore the lost glory of the river system. Transit and transshipment of cargo between Northeastern India and Bangladesh using Chittagong port will start soon, announced Khalid Mahmud Chowdhury, Bangladesh Minister of State for Shipping. “Tripura will become the gateway to northeast. Trial runs were completed and all arrangements for immigration and

Customs formalities on the Bangladesh side are also ready,” he added. A new deep sea port is also being developed by the government of Japan at Matarbari in Cox’s Bazar near Chittagong Port and this would be completed by 2027. This too would help the carriage of goods from Bangladesh to Tripura.

Triumphing the rejuvenation of waterways, an ODC cargo (DTH Reactor) for the upgrade of the Numaligarh refinery in Assam has been brought over the IW-2 to arrive at Pandu Port, from where it is en route to Silghat, and will then be transported further along the Dhansiri river to the NRL jetty near the Project Site in Numaligarh.

In the last 9 years there had been a lot of changes in the regulatory regime, especially in the National Waterway Act. Earlier there were only 5 waterways. The Act brought in 105 more river into the system. In the same period, the number of operational waterways had significantly gone up. Earlier there were 3 operational waterways for cargo, today it was 23. The value and volume of the cargo moving had grown exponentially. In 2014 it was roughly 30 million tons per annum. Currently it was around 130 million tonnes. In terms of values, the cargo movement had grown from ₹7000 crores to ₹51000 crores in the national waterways.

In 2021, about 3.5 million tonnes of cargo moved between India and Bangladesh through the waterways. In spite of the COVID impact, the cargo

movement increased by 25% in that year. The bilateral agreement between the two nations for use of inland waterways for trade movement was inked during the 1970s and has been subsequently revised to include 10 waterways protocol routes through which Indian vessels can transit through Bangladesh for connecting to northeast India and so can Bangladesh vessels.

In 2018, an agreement was inked for using Chittagong Port for connecting northeastern states. A tripartite agreement has been inked between India-Bhutan-Bangladesh for movement of cargo through inland waterways and the riverine routes have also been included in the agreement with Nepal. Eight bunkering stations have been declared on each side. There are currently 13 designated ports on each side (total 26), which will further be increased, for movement of cargo and round the clock navigational aids are provided for the operational routes, shares **Arnab Bandyopadhyay, Lead Transport Specialist – South Asia Region, World Bank.**

National Waterway 1

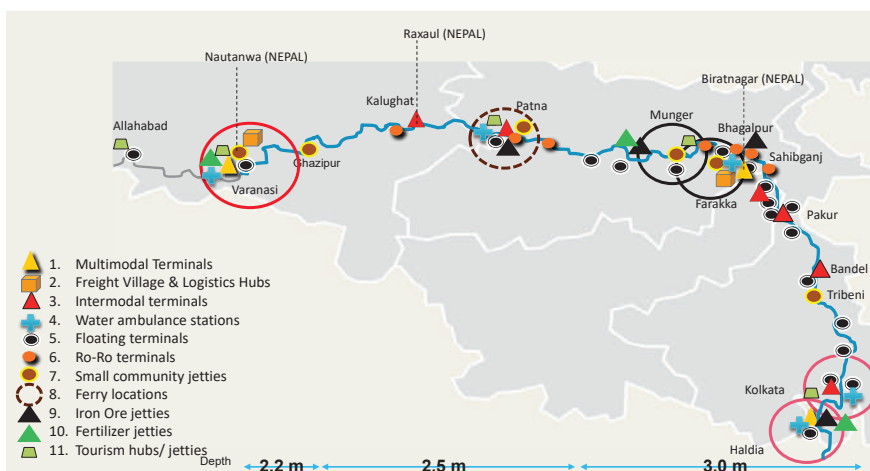
The National Waterway (NW1) on river Ganga has been the major focus of development. It also accounts for about 90% of the Jal Marg Vikas Project. It stretches from Varanasi to Haldia with around 1100km of fairway maintenance which itself is a humongous task. As the traffic has not yet stabilised, hence

it becomes difficult to maintain the requisite 45 mts width and 2.5 meters depth across the stretch, informs IWAI. In the initial phase the focus is on the below listed stretches:

- Haldia – Barh (960km) – proposed LAD of 3 meters
- Barh – Ghazipur (290km) - proposed LAD of 2.5 meters
- Ghazipur – Varanasi (133km) - proposed LAD of 2.2 meters

“We may not go for massive investments the type we did in Sahibgunj and Haldia. Even if we are able to give good quality concrete all weather jetties with good road connectivity and night navigation system that would suffice,” informs **Jayant Singh, IRTS, Vice Chairman, IWAI.** Further the NW 1 feeds into a larger “waterway grid” connecting to the IBP route on Brahmaputra river (NW-2), which offers huge potential for a very viable all weather, eco-friendly movement of goods and passengers across the entire eastern region. This can be further connected to coastal shipping and go further to Myanmar and Thailand. Locations for multimodal terminals in Varanasi, Kalughat (Bihar) and Sahibgunj (Jharkhand) have been chosen considering their proximity to Nepal and Bhutan. Currently Stone aggregates are moving to Bangladesh on these waterways and return traffic consists of coal. There is also potential for moving POL. A multimodal route using roads and waterways through Karimganj (Assam) is being developed to connect Assam with Tripura, Meghalaya, Mizoram and Manipur.

The fairway on IBP routes is being developed for round the year navigability with (2.5m LAD) being provided on Sirajganj (Bangladesh) – Daikhowa stretch of IBP routes 1&2, and Ashuganj – Zakiganj stretches of IBP route 3&4. This fairway development costs ₹305.84Cr with a sharing ratio of 80:20 between India & Bangladesh between (2019 – 2026). In Bangladesh as well the World Bank is supporting numerous projects on the Yamuna corridor and Dhaka-Chittagong-Ashuganj corridor, as these are the busiest corridors and have the highest potential for regional waterways





DIGITAL GATEWAY FOR YOUR CONTAINER

ODeX CONNECTS SHIPPING LINES, FREIGHT FORWARDERS, IMPORTERS, EXPORTERS, PORTS, BANKS ETC. ON A SINGLE PLATFORM TO STREAMLINE THE EXIM PROCESS



100+ SHIPPING LINES



1 L+ DOCUMENTS RELEASED EVERYDAY



20K+ IMPORTERS/EXPORTERS



20K+ FF'S/CB'S

INVOICING | PAYMENTS | DELIVERY ORDER | VGM | GATE PASS | MANIFESTATION | CONTAINER DEPOSIT



SCAN NOW TO
DOWNLOAD BROCHURE



www.odexglobal.com

development. Ashuganj port on the river Meghna is being revamped, and it is about 50 km from Tripura's capital Agartala.

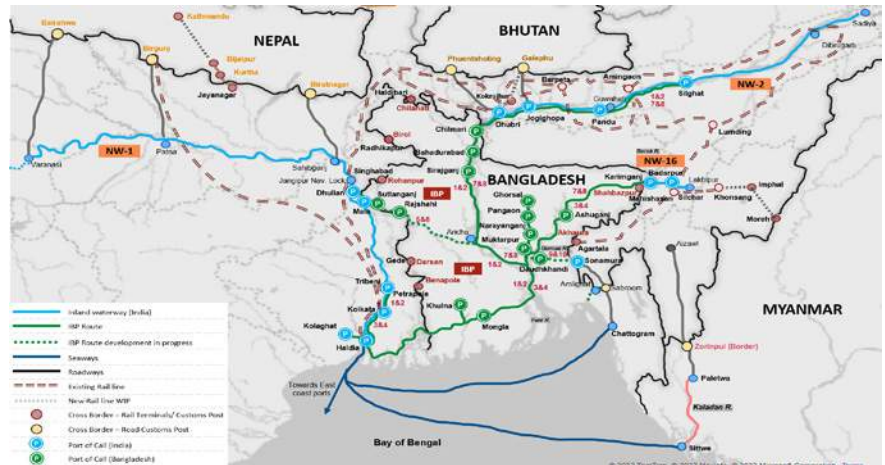
New IBP routes coming up

On the NW-2 (Brahmaputra River) which flows upto Sadia in Assam, IWAI is constructing a cargo terminal at Dibrugarh. Presently cargo movement which is up to Pandu terminal in Guwahati via Bangladesh, can be extended up to Sadia in Assam. In Lower Assam, Barak River is carrying cargo till Silchar which is close to Myanmar border.

Sharing details on new IBP routes being developed, **Sanjay Bandopadhyay, IAS, Chairman, IWAI** said, "Maia to Aricha (IBP route 5,6) and Sonamura to Daudkhandi (IBP route 9,10) are being developed for cargo movement. Upcoming IBP routes on Feni river will connect Tripura to Chattogram and Chandpur to Chattogram, while further strengthening connectivity to Bhutan and Nepal.

The Maia to Aricha is a comparatively shorter route to connect Bangladesh and northeastern states, currently stone chips and food grains are moving to Bangladesh through this route. It reduces the distance from UP, Bihar and Jharkhand to Bangladesh/northeast region by approximately 940km. Two floating terminals are being planned on this route and it has a cargo potential of 2.6MMTPA.

The stretch from Sonamura (Tripura) to Daudkhandi (Bangladesh) will move cargo from Tripura to Haldia via Chittagong Port. Feni is a trans-boundary river that flows through Tripura and Southeastern Bangladesh. It passes through Sabroom town and enters Bangladesh at Amlighat. The distance from Amlighat to Bay of Bengal is just 34km. Currently, the distance of Kolkata/Haldia seaports from Tripura is 1,650km, which can be reduced to 95km (from Tripura border) via Feni river to Chattogram. Similarly, distance from Agartala in Tripura to Kolkata is reduced by 700kms through waterways. Transportation cost will be reduced by 25-30% if cargo is moved to Tripura via waterways in Bangladesh.



The river grid

Seamless connection between NW-1(Ganga), NW-2(Brahmaputra) and NW-16(Barak), the government was keen to create opportunities via an economic corridor of 3500 kms connecting Northeast India with the rest of India, via Bangladesh. This will also link Bhutan and Nepal with Bangladesh onto the international trade routes through multi-modal connections developed in India. As India develops Sittwe port in Myanmar, the regional economic integration, cooperation & amplification can smoothly happen among BBIN - BIMSTEC - ASEAN countries. The Government was working for deeper & longer network integration of inland waterways in this region to provide a future ready mode of movement that was economical, sustainable, and efficient.

Multimodal hub in Tripura

Tripura imports commodities worth ₹20,000 crore annually, this cost can be reduced if the commodities are **imported via waterways," says Subrata Choudhury, Additional Secretary, Transport, Govt of Tripura.** River Gomati from Sonamura (Srimantapur) to Daudkandi (Bangladesh) has been declared as IBP route 9, wherein a fairway of 2.5mts depth and 30mts width is being developed by Bangladesh at their own cost. Floating HDPE pontoon adjacent to Srimantapur Land Customs Station has been developed and tenders have been called for developing a permanent jetty.

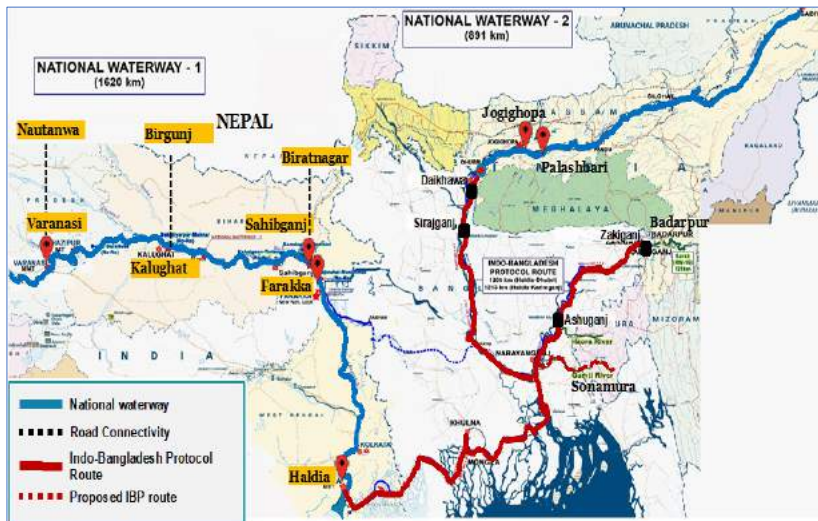
Tripura is developing a SEZ in Sabroom on 16.35 hectares, for which foundation has been laid in Sept 2020. Rubber based industries, threads, textiles & apparel, bamboo and agro food process industries are being developed. A logistics hub is also planned in Sabroom over 84.38 acres. It will be connected to Agartala by 113km railway line. A railway yard is under development in Sabroom which will be connected to ICP Sabroom (Land Port). Sabroom is connected to NH 08 and NH208, which connect to Chattogram port at a distance of 72km. It is also connected to the Maitree Setu bridge on Feni River. ICP Ramgarh in Bangladesh also connect to NH 08 & 208.

Multimodal connectivity in Udaipur

Udaipur is the headquarter of Gomati district in Tripura. River Gomati has been declared as IBP route. A multimodal logistics hub is being developed by NHIDCL on the bank of river Gomati, spread on an area of 20 acres. Udaipur connects to NH 08 & 208. A proposal has been made for extending the IBP Sonamura – Daudkandi upto Udaipur. The land customs station at Srimantapur (located in Udaipur) has been upgraded as integrated check post (ICP), which is now the second busiest after Agartala ICP. The Sonamura terminal is located near Srimantapur ICP.

Multimodal project in Nischintapur

An international rail yard at Nischintapur is being developed as part



of the Agartala (Tripura) – Akhaura (Bangladesh) rail link which will connect Indian Railways to Bangladesh Railways. The project is already 98% complete. An ICP is also planned at Nischintapur on 40 acres of land. NH 208 that connects Agartala MBB Airport to Sabroom via Belonia passes through Nischintapur land port. The MBB Airport is just 8km from Nischintapur.

To make these multimodal projects successful, dredging of River Gomati – 20kms on Bangladesh side and 5kms on Indian side connecting to Tripura, including the 300 meters stretch in the no man's land is necessary to enable movement of smaller vessels of 50-100MT capacity. IWAI was also bringing in electric catamarans at Varanasi, Mathura, Ayodhya and Guwahati. The first Indian hydrogen filled catamaran would be launched at Varanasi. Private investors could bring in latest technologies.

Connecting Bhutan

Bhutan is using multimodal transport (road+IWT) for moving stone aggregates to Bangladesh. Phuentsholing town in Bhutan is connected to Dhubri river port in Assam and similarly Gelephu town connects to Jogighopa port in Assam for moving cargo to Bangladesh and Haldia Port. This entire movement is on NW2. On this stretch, shipments of 51,000 tonnes were moved during 2021-22. A MMLP with connectivity to IWT terminal is being developed at Jogighopa to further develop Bangladesh bound trade from Bhutan.

Connecting Nepal

Waterways transport was included under Indo Nepal protocol to treaty of transit, 1991. Current connectivity to Nepal is as follows:

- Kolkata-Sahebganj by waterway and then to Biratnagar by road
- Kolkata-Kalughat near Patna by waterway and then to Birgunj by road
- Kolkata-Varanasi by waterway and then to Bhairahwa by road

This connectivity to waterways enables Nepal to also connect to Kolkata/Haldia ports.

Connecting Mizoram

IWAI has constructed Sittwe Port in Myanmar which would soon become operational and can move cargo upto Aizwal in Mozoram. Cargo can be moved from Haldia to Sittwe and then to Paletwa in Myanmar and then by road to Aizawl.

Challenges

Most of the waterways in India are based on glacier-fed river system, as compared to other countries where waterways are developed using canal systems and channelized waterways. Thus Indian rivers have their own set of challenges such as water availability and nature of shift of water course. Indian rivers carry heavy silt load which makes maintaining LAD a major concern.

Another concern is the shift in course of water flow, because we can construct a terminal at one location, but few years down the lane if the river flow

changes 5-6 kms then the jetty becomes void. Floating jetties can be used, but this again affects the first and last mile connectivity. Further, a lot of road and rail bridges crisscrossing the rivers are another hurdle.

Least Available Depth (LAD)/Draft issues

“Oceanwhale Shipping & Services currently operates 9 barges on IBP route. The company has moved cargo for PepsiCo and Emami on NW1 in 2019. First aggregate movement from Bhutan to Narayanganj using Dhubri as a port was done by this company. In 2022, the company moved 1800 tonnes of TMT bars for Tata Steel from Haldia to Pandu port, shares Prabhakar Prakash, Director of the company.

He adds, “The main technical challenges that we have encountered on NW1 & NW2 are a vessel is commercially viable if it is able to carry more cargo on the available draft. Any dead freight is a loss of volume. Shipping companies while undertaking any voyage first check the draft limitation of the previous year, based on which the draft at which the cargo is to be loaded is decided. Then the commercials are decided upon and cargo is moved to the port and the ship is brought to the loading point.

If due to discrepancy in planning or local issues the ship is forced to load less then it directly impacts the revenues of the vessel. Generally the Least Available Depth (LAD) problems are encountered beyond Dhaka, i.e., from Sirajganj to Pandu sector, and beyond Kolkata till NW1. Instead of LAD, maximum draft should be used as a measure for loading a vessel, then it will remove all the misinterpretations on under keel clearance requirement. Ports in India and Bangladesh use draft as the measurement, which should also be used for waterways as a common unit. Draft restrictions on NW1 and NW2 should be clearly mentioned online as it will help in better voyage planning for the vessels.

Night navigation restrictions

A vessel is profitable if 24X7 navigation and faster turnaround is available. In most sections of the waterways night navigation needs to be developed. Use of

buoys or artificial aids to navigation will also help. DGPS and ECDIS technology should be brought in waterways for faster turnaround of vessels and lowering the OPEX. In case of groundings or accidents these technologies will help in deciding whether it was a human or technical error. Because, ECDIS maintains all the data logs for past couple of months, which can be analysed for reasoning of any accident.

Regulatory challenges

On the IBP route, especially from Kolkata to Pandu, relaxation in Customs transit documentation is required to reduce the delay in movement of vessels due to Customs formalities. A standard SOP for Customs is required as different Customs officials have several interpretations of the laws causing confusion and the vessels is unable to move. Endorsement of Customs Transit Declaration (CTD) should be only at Indian entry and exit points, to avoid duplication of the same process at Bangladesh Customs as well.

Subsidy

Railways is offering subsidy for moving cargo to northeast, which makes waterways uncompetitive, further railways have the advantage of availability of two-way cargo from northeast. The subsidy government is spending on rail freight in northeast is actually not required.

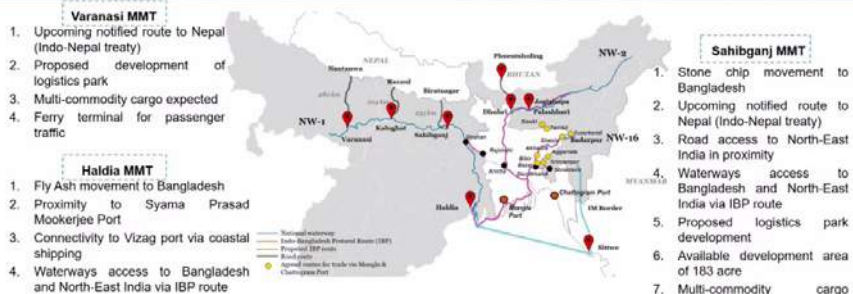
Duty assessment issues

Duty assessment for rail, road and waterways is different in Bangladesh. Cargo moving through river is charged with higher duty making it uncompetitive with rail and road. Since waterways also comes under land Customs, duty assessment should be same as road/rail. Currently, river mode of transport is not allowed for Nepal cargo. If it is allowed it will make logistics more cost efficient for Nepal.

Operational Challenges

- Technical compliances for coastal vessels, river-sea vessels and inland ships differ between India and Bangladesh. Uniform technical compliance parameters need to be

Strategic locations of MMTs



brought in. There are also issues relating to survey and certification requirement of these 3 kinds of vessels.

- Availability of drafts at ports is an issue, which also restricts the use of larger/cheaper vessels. Priority in berthing for these vessels at all the ports.
- Customs and immigration challenges are still being faced by vessels operating on waterways.
- Flag-state inspection and port-state inspection for vessels plying on waterways
- Uniformity in crew repatriation policy and insurance policy for hull & machinery.
- Different practices are followed for training, certification and safe manning of crew for inland, coastal and RSV vessels among different countries.
- Safe navigable channels and VTS for vessels plying on these routes
- Standardisation of training and certification of seafarers is required.
- Nepal and Bhutan should also be encouraged to establish their secretariats for port-state and flag-state inspection of vessels.

Availability of vessel operators

This is another chicken and egg scenario, wherein the traffic should come first or the service providers. If more low draft, shallow flat bottom barges are provided for moving on Indian waterways, then our throughput can be increased by a factor of 2 atleast, says Vice Chairman, IWAI. Currently, there are only 11 vessels plying on NW1 with a fleet capacity of 7700MT.

Dredging companies

India lacks good quality dredging companies which can take up large scale contracts. If I place a tender for around ₹200 crores then we don't have more than one or two companies that qualify, shares Vice Chairman, IWAI.

Infrastructure

Apart from Assam, West Bengal, Gujarat and Maharashtra, we don't have a well-organised inland water transport department or agency in other states.

Lack of anchor cargo

Around two third of railways revenues comes from carriage of coal and this is its anchor cargo. But in waterways, on the IBP route 80% of the cargo comprises of flyash. Thus, apart from flyash we don't have much of anchor cargo in waterways.

Financing vessel development

The sector being nascent, banks are reluctant to fund ship development due to uncertainty of cash flows. Vessel building is also not recognised as infrastructure sub-sector for subsidised or incentivised financing. The vessel constructed is not considered as collateral against debt financing availed.

“Considering the above challenges, handholding by the government for waterways has to go on for atleast a generation, if we are to make them viable,” says Jayant Singh, Vice Chairman, IWAI. The potential is huge and it's only a matter of time till the waterways are transformed into a mainstream mode of transportation as they did in the past.



TECHNOLOGY CAN STREAMLINE YOUR SUPPLY CHAIN

In India, supply chain inefficiencies are a significant challenge. It is imperative that users leverage APIs to spur innovation and create a more user-friendly and data-driven ecosystem, which can streamline the supply chain, increase transparency and reduce costs.

GIRISH SURPUR
GM-LOGISTICS BUSINESS UNIT, NEC CORPORATION
INDIA PVT LTD & DIRECTOR-NLDSL

Q. Unified Logistics Interface Platform (ULIP) was launched along with the National Logistics Policy in September 2022. How has been the user response so far?

ULIP is facilitating India's logistics sector with data-driven visibility and transparency. There has been a sound adoption of technology for various operational activities and processes by the industry players. With ULIP's data services, companies are building innovative solutions/apps to optimize the utilization of technology.

Since its go-live on 17th Sept. 2022, there are 470+ industry players who have registered on goulip.in with the willingness to access data through ULIP.

76 entities have already signed NDA for taking the benefits of the platform out of which 22 entities have already developed 30+ live applications with actual users. Major industry players like Maruti Suzuki, DHL, Safexpress, Ultratech, TCI, Jindal stainless, Tata Steel, Yes Bank, BOSCH, Total group, etc. have been already roped in to ULIP for streamlining their supply-chain.

Q. Data sharing has been a major concern in the logistics sector? What measures are you taking to ensure data privacy?

The design of ULIP has been done based on the principles of National Open Digital Ecosystem (NODE) as defined by Ministry of Electronics of Information

Technology (MeitY).

The platform tightly binds its application through a token exchange mechanism, and user-id/password authentication or through IP binding, and ensures that no third party can access the service through application. There is no open API based on ULIP service that can be developed/published without proper consent from the concerned parties. For every access, logs are maintained, which are shared if the need arises with concerned authorities in the case of any analysis/investigation.

Q. Following the success of Logistics Data Bank (LDB 1.0), NLDSL was in the process of launching LDB2.0. What can the users expect in LDB2.0?

In the current LDB Platform, delays and bottlenecks are identifiable with the existing data sources integrated with it, but its capabilities are limited in finding the reason for such delays. Even though LDB users are getting the tracking and alerts for their containers from the portal, for information like document approval, compliance clearance, etc. they are dependent on other different sources.

The enhanced LDB platform, or LDB 2.0 powered by ULIP is poised to have far-reaching direct and indirect benefits to all importers, exporters, domestic users and logistic service providers.


It is developed to provide the users information related to document flow

and compliance status flow of the EXIM cargo along with the physical movement of the cargo. With additional data like customs clearance, yard clearance, out of charge, and other related information, users now not only can track where the consignment is stuck, but also know the reason behind it.

With ULIP, LDB is working to extend its services from containerized cargo, to bulk, break bulk and domestic cargo segments. In fact, tracking of multi-modal transportation like road, rail, air and water shall be unified under LDB 2.0.

Q. Tracking of containers generates a large volume of data. Is this data being used to improve the logistics scenario of the country?

LDB has been consistently providing analytics on dwell time, turnaround time and transit bottlenecks. We have been publishing monthly, quarterly and annual reports offering insights into stakeholder's performance across today's competitive landscape. Analytics helps in identifying the bottlenecks effectively to ensure better planning and streamlining of processes, reducing lead time, which in turn brings the overall transaction cost incurred down.

In FY 23-24, LDB will further focus on providing analysis on new aspects like vessel handling, berth productivity, cross-movement of containers between the ports/ corridors, empty container inventory, etc. 

I

n January 2023, Maruti Suzuki made the headlines for moving a record 3.2 lakh units via railways in the previous year. In a period of ten years the automaker has seen a five-fold increase in dispatch of its cars by rail. The share of railways in its outbound logistics has increased from 5% in 2013 to 17% in 2022. The company had obtained an Automobile Freight Train Operator (AFTO) license in 2013, following which it has been operating high-speed high-capacity auto-wagon rakes on the Indian Railways network. 40 specially designed rakes are in operations with each rake having a capacity to carry 300 vehicles.

“Going forward we will increase these volumes further by setting up dedicated rail sidings at our facilities in Manesar, Haryana and Gujarat,” informed Hisashi Takeuchi, MD&CEO, Maruti Suzuki India.

Highlighting the expediency of moving cargo by railways, **R S Kalsi, Chairman - National Council on Auto & Auto Ancillaries, ASSOCHAM & Executive Board Member, Maruti Suzuki India Ltd** said each double railway rake was equivalent to 40 long haul trailers. The average road distance of a trailer was about 1,600 km. By shifting to railways, they were able to eliminate 64,000 km of the trailer movement by road per trip. They had eliminated 2 lakh truck trips to date and reduced carbon emission by 66 million tons.

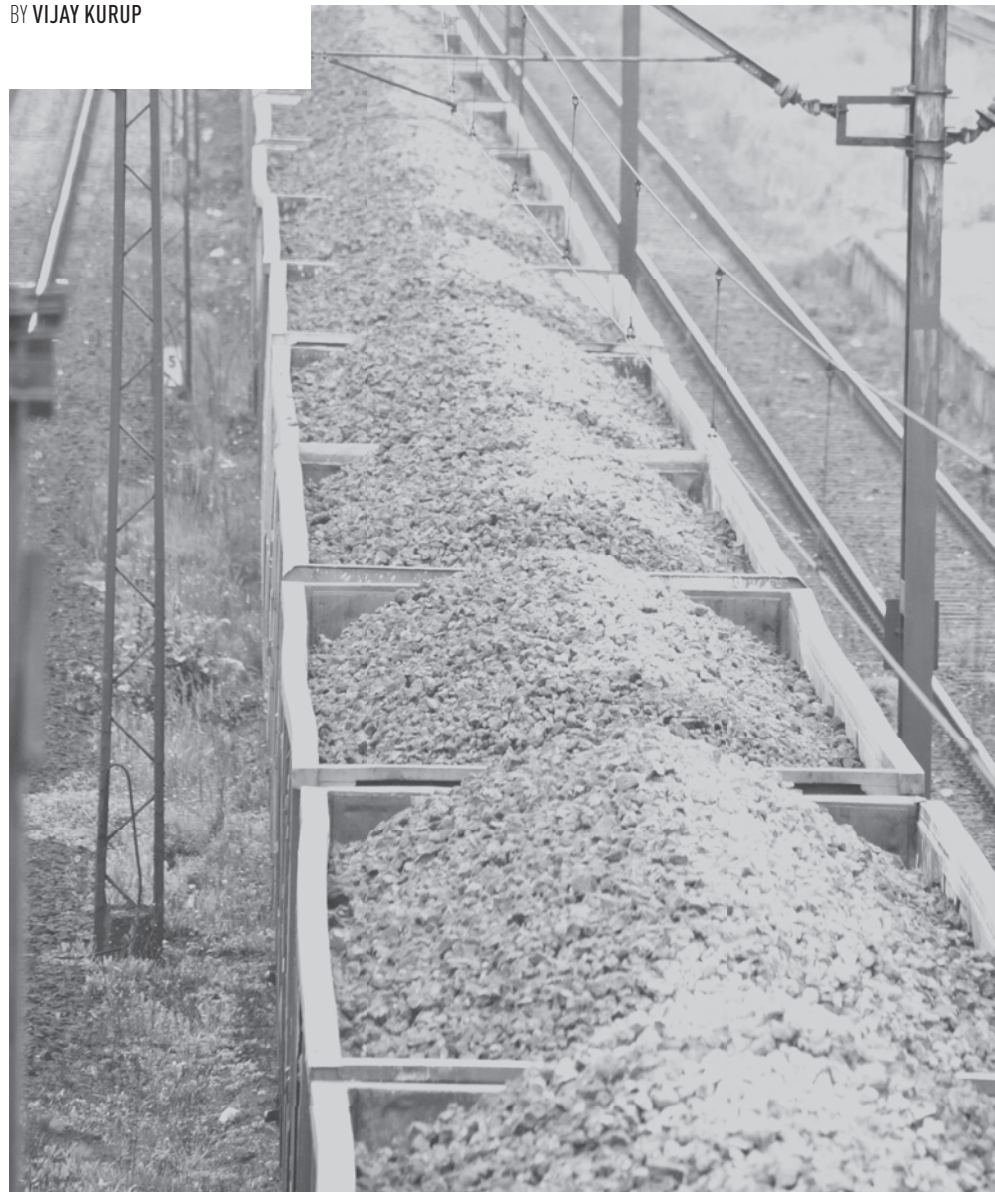
The target: 3000 million tonnes by 2030

Clearly, Indian Railways is aggressively surging ahead towards a vision to grab 45% of the domestic freight share by 2030. But the question that is in everybody's mind - is it achievable or was it a bridge too far?

CAN 45% OF DOMESTIC CARGO BE BROUGHT TO THE TRACKS?

Clearly, Indian Railways is aggressively surging ahead towards a vision to grab 45% of the domestic freight share by 2030. A 360° approach involving the infrastructure, expanding cargo profile, last mile connectivity and private participation has been put into play

BY VIJAY KURUP



Indian Railways has put forward a mega National Rail Plan, for the growth of the rail sector by 2050. An important goal in this plan is the Mission 3000 million Tons. Last year they had loaded 1,400 million tons of freight, which was about 26% of the total freight transport in the country. This year they were targeting 1,500 plus tons. By 23-24 they intend to add another 100 million tons. Their aim was to reach 3,000 million tons by 2030.

However, the journey will not be a cakewalk. The investment in IR had not been commensurate with the growth of the economy, whereas the highways had received substantial funding. They had to develop substantial terminal capacity, first mile and last mile connectivity for capturing the traffic. There was a need to increase the rolling stock fleet to carry the traffic and develop adequate maintenance facilities.

To carry 3,000 million tons, 1,200 works or projects have been identified, which were to be completed in the next 5 years. The projected cost of this capex was about ₹8.5 lakh crore. That included about 9,000 plus km of new lines; doubling and multi tracking to about 25,000 km, automatic signalling on over 10,000 km of track. They were planning to upgrade their traction i.e. overhead equipment from 1x25 kv to 2x25 kv, which would enable them to carry higher freight volumes.

IR intended to add more than 1.5 lakh wagons to their fleet. In 2022-23, the budgetary outlay for the railways was, at the project stage, ₹1.37 lakh crores. This was subsequently enhanced to ₹1.59 lakh crores. This year it has been increased to ₹2.41 lakh crore - an increase of more than 50%.

Multimodal logistics

Plans were afoot to bring different modes of transport together. The Department for Promotion of Industry and Internal Trade (DPIIT) and Ministry of Commerce were now involved in integrated planning of various modes of transport, to bridge the gap between different modes of transport. Every single project which was now being taken up went through the process of evaluation by the network planning

group. The road infrastructure, the ports, and the railways, all were considered together and then a decision was taken. In 2009-14 the speed of commissioning of infrastructure was 4 km per day. It had now increased to 11 km per day and their plan was to further increase to 16 km per day.

Private sector participation

To encourage private sector participation for development of terminal facilities, the land management policy had been substantially eased by IR. The right of way policy had been simplified recently. The lease charges for the new cargo terminal will only be 1.5% of the market value of the land per annum.

Gati Shakti cargo terminal policy

The policy was launched in December 2021 for construction of cargo terminals on railway land also. Application process also has been substantially simplified. Online applications and time bound approvals have been provided. Standard layout could be adopted and no departmental charges would be levied if it hasn't been registered for development of Gati Shakti cargo terminals. No license fee was levied on linear connectivity to the railway line. Common user traffic facilities would be developed without any great cost. All possible help would be given to gati Shakti cargo terminals and the response was good. So far 36 Gati Shakti terminals have been commissioned and 96 more locations have been provisionally identified for development. In principle approval has also been given for 97 locations.

In addition to developing terminals, the private sector should also be roped in for adding more wagons. For two reasons. Firstly, investment capability exists in the private sector. Secondly once the private sector has invested, it is married to Indian Railways for 30 years to carry freight. IR will have to get the end users staked into the system.

Pace of infra projects gaining steam

In the last eight years, from 2006-14 Indian Railways commissioned projects of about 4.16 km per day. But from 2014 to 21-22, it had increased to 7 km per day.

In 2023, it had further increase to 12 km per day. It will soon cover every nook and corner of the country. In 2006-14, IR developed 4,570 km of track while 2014-2023 13,080 km of track doubling was done. It will also help in increasing the speed of goods trains. Railways has successfully completed electrification of 85% of the network in record time and it will be 100% completed in the current financial year. Government has allocated the highest ever capex of 2.40 thousand crore for 2023-24 for Railways. IR has placed orders for about 84,000 wagons.

Competing with the road sector

So far, the focus of IR was on moving bulk goods but now the focus was on bringing goods from road to rail, especially consumer goods, that could easily be sent from one city to another, through containers. Indian Railways has launched a new product in collaboration with Indian Post of door-to-door service to the customer, offering first and last mile services. It is expected that the highest ever loading of 1500 million tonnes would happen this year.

DFCs to go full throttle by year end

95% of the DFCs would be completed by December 2023, informs **Nanduri Srinivas, Director - Operations, DFCCIL**. Faster, longer and heavier trains will now increase the throughput. Carbon footprint would be reduced by 3.06 million tonnes.

10,000 hectares of land have been acquired. Earth work was about 2371 lakh cubic meters. Major emphasis has been on Road Under Bridges and Road Over Bridges, which had come to be about 850 plus. That had given them an edge and unhindered access to freight trains had been made possible. 61% of the project has been completed and they hoped to complete the project by December 2023, except for a small patch near Mumbai which would go to the next year.

Hinting at the operational efficiency he said, they had already done about 75,000 trains on their system. Coal rakes for the power industry used to take four days from Bihar to Dadri. Now the transit time was two days. By March end there would be total connectivity from Mughalsarai to Dadri. Rakes would be

moving within 18 hours. Real speed was about 55-63 km. When the entire rakes would be moving on DFC the average speed of powerhouse rakes would be 65 km.

They are looking at providing more terminals. One Gati Shakti cargo terminal had been launched at New Rewari. The entire investment was coming through private participation. They were just giving the platform.

Challenges

Railways had remained under invested for long

For a long time there was under-investment in the cargo operations of Indian Railways – be it acquisition of wagons, rolling stocks, coaches or locomotives. Lack of focus on doubling of lines, third line fourth lines etc. Not really understanding the customer or the industry requirement.

Today the total potential of the cargo basket is 5000 million tonnes, of which the Railways would move around 1500 million tonnes this year and 1600 in the next year. While the overall size of the basket had grown up since the 1950s 55 times, the railway's growth has been only 20 times. There was a challenge here.

Focus on non-conventional cargo

What the railways are not able to target was the non-conventional goods. The non-conventional goods were about 2000 million tons, constituting 43% of the total basket. Out of this, the Railways had a very miniscule share of about 6%. However, looking at the last year's figures, the incremental loading that they did in the last 2 years, 2021-22 was around 185 million tons, 84 tons will be moved in this year. From 2011 the total movement was 275 million tons. Thus, in the last 10 years they had been able to achieve in 2021-22. They were in the process of achieving a quantum jump.

Manish Puri, President ATCO, said that if 3,000 million tonnes was to be achieved, conventional cargo growth was not going to be able to help. Even if growth was to be at 7-8%, they would get stuck at 22-30 million tonnes. That incremental business must come from unconventional or goods that are today not being carried on rail. Key aspect was

Recording a new milestone in rail freight movement, DFCCIL and CONCOR conducted the inaugural run of double stack container train on Dadri – New Rewari alignment. The trial run was conducted by CONCOR on April 20 from ICD Dadri to Mundra Port, and will reduce the cargo movement time by further 9 hours.

that the goods should be volumetric, lightweight, and manufactured goods. The way to bring them to rail was through multimodal means. These goods required transit sensitivity and certain assurance of service. This implied that the capacity must be increased on the railway system – both at the terminal and track level. At the terminal level, focus needed to be on bringing in more private participation.

When the talk is about end-to-end products, the kind of agility that was required to deliver the product, was not something that the public sector was capable of. There was a need to look at how to partner with 3PL logistics operators.

Timely completion of projects remains a bottleneck

Animesh Gupta, President and Chief Logistics Officer Jindal Steel & Power Ltd said that according to the National Railway Plan, the share of freight had to go up from current 27 to 45 per cent. In 2021-2022, 18 million tonnes was moved. Out of this 45% happened to be coal, 17% was iron ore and 38% was other commodities. If we must ramp up from 27 to 45%, then logistics need to be redefined. He further stated that though by 2030 IR will be reaching 45%, a few enablers were missing.


In Jindal Steel and Power Ltd, they were currently producing 9.3 million

metric tonnes. By 2030 they intend to produce 390% more, to reach 377 million metric tonnes. Their present share of freight with Railways was about 65% which they planned to take to 90%. The balance 10% would be the last mile.

The steel industry faced a lot of challenges in movement of finished goods. The average speed was about 15-16 km per hour. In 2030 the speed would be 50km per hour. That was the gap. The growth was three times and the challenges were lack of infrastructure. For instance in the railway project Angul - Sukhinda rail line, there was a delay of 7.4 years. It was supposed to be completed in Feb 2015, but was completed only in July 2022. The Vaswani Jagpur doubling line was to be completed in March 2019, but was now expected to be completed in December 2023, a delay of about 4.8 years. These measurements need to be there. Without this, the 2030 vision will not be accomplished. You must measure every day, every month, what is happening, he emphasized.

Optimum usage of wagons necessary

Steel industry has a lot of by-products like slag. Slag movement happened only in special types of box and wagons used for coal transportation. The thrust of the government was 100% on using these boxes for coal, in which case how would slag be transported, asks Animesh Gupta? They had more than 5 lakh tonnes stored in their place. It was to be used in the cement industry, but was not reaching there. The cement industry is suffering for want of raw material. This needed to be taken care of. Rationalization of usage of boxes needed to be done.

While a few hiccups remain, but, nevertheless a beginning has been made. Indian Railways has come to terms with the significant contribution cargo operations are making to its revenues. For long, passenger trains have enjoyed a preferential treatment, but not anymore. With DFCs and new cargo terminals coming up, the private sector being roped in, a major chunk of domestic cargo will soon be seen chugging on the tracks. 



THE ASCENDENCY OF RUPEE FOR INTERNATIONAL TRADE

There is a marked trend among nations to free themselves from the yoke of the Dollar hegemony. In an increasing world of polarization, dependence on a single currency would be stultifying a country's own position. Internationalization of the Rupee is the way forward.

BY VIJAY KURUP

O

n a recent trip to Egypt, I was standing at one of the popular tourist sites. As always, the ubiquitous vendors were harassing the tourists. A statue of Nefertiti caught my fancy. I asked him, "how much?" He replied, "10 Pounds (Egyptian Pounds)." He then asked me, "Are you Indian?" When I answered in the affirmative. He said, "Then you can pay me in Indian Rupees!" Really! Had the India currency gained so

much leverage, that a vendor, who is very particular about his income, was more than willing to sell it for an Indian currency? I was aware that Indian currency had started gaining international acceptance. But this response from an impoverished itinerant vendor caught me off guard.

India's position as a manufacturing powerhouse has been steadily growing. The Reserve Bank of India (RBI) has taken a step towards internationalizing the Rupee. On 11th July, 2022, the RBI had announced an arrangement for the country's traders to settle imports and exports in INR, "in order to promote growth of global trade with emphasis on exports from India and to support the increasing interest of global trading community in INR, it has been decided to put in place an additional arrangement for invoicing, payment, and settlement of exports / imports in INR." The move is to overcome the Dollar dominated trades. It forms another option to settle

payments. Several Asian economies have been brought into the fold.

The Rupee trade agreement was initially only with Iran and Russia. However, the Russian-Ukraine hostilities have been a catalyst for the promotion of INR as a currency for trade. In the aftermath of sanctions imposed by the West, India has been trying to promote Rupee trade. The RBI dispensation is expected to facilitate importers and exporters to circumvent the rules that prevent the use of a global currency such as the US Dollar, EUR, for trade with countries. Indian companies have been looking for alternative modes of payment for their imports.

According to preliminary reports, the interim data projections, in 2023 indicate that the contract logistics market is expected to grow at a slighter slower pace than in 2022, as the economy decelerates. The slowdowns will be more pronounced in Europe and North America, which are expected to see growths below the global average. North America is expected to grow by 2% y-o-y, and Europe is expected to grow by just 0.6% in 2023. Unsurprisingly the market will be driven by the Asia Pacific region (5.7% y-o-y), which is expected to see strong GDP, manufacturing, and retail industry growth in the coming year.

India's economic growth was projected to grow by 6.8% in 2022 by the IMF, down from its earlier estimates of 7.4% in July and 8.2% in January. The global slowdown has already started to affect India's export earnings and industrial activity, the country's growth is likely to slow over the next two years.

When the sanctions kicked in on 5th December, 2022, the US, and the European allies, sanctioned the Russian central bank and froze its reserves of US\$ 630 billion, thereby taking away its ability to exchange Dollars for Roubles. In a retaliatory response Russia asked the European nations to pay in Roubles for its fuel purchases from Russia. The EU countries agreed to set a price cap on Russian oil at US\$60 per barrel. The price cap applies to seaborne crude oil, petroleum oils and oils obtained from bituminous minerals which originate in or are exported from Russia. The cap comes on top of the EU import



ban on Russian seaborne crude oil and petroleum products, and the corresponding bans of other G7 partners.

India's exports to Russia, the sanctions notwithstanding, is expected to rise, once the Rupee-Rouble exchange mechanism hurdles have been cleared. Reportedly, Moscow is looking to purchase many more products such as parts for cars, aircraft, and trains.

Russian energy company Gazprom has opened a special Rupee account with a public sector Bank to ease transactions in the Indian currency. Under this service, the exporters and importers would be able to use a special Vostro account linked to the correspondent bank of the partner country for receipts and payments denominated in Rupees. A Vostro Account is an account that a correspondent bank holds on the behalf of another bank in a foreign country. A correspondent bank is a bank that provides services on behalf of another local financial institution. It is authorized to conduct all financial transactions on behalf of another financial institution. For example, the HSBC Vostro account has been held by SBI in India.

This arrangement has been implemented to promote the growth of export trade from India through the medium of Indian Rupee currency. This would also help India save foreign currency in imports. Sri Lanka is undergoing the worst currency crisis in the history of the island. Reportedly the Central Bank of Sri Lanka (CBSL) had said that it was awaiting the Reserve Bank of India's approval to classify the Indian

rupee (INR) as a designated foreign currency in Sri Lanka, to promote trade and tourism.

Further the INR currency arrangement stands to the advantage of Sri Lanka currency because of its potential to draw foreign investors who would rather have the stability of a substitute currency. Further trading in INR might help the Sri Lankan economy grow, at the same time would reduce current demands of USD\$.

India's push for local currency transactions with the UAE and Saudi Arabia, gathered traction for cross-border trade in Rupee. The move has been impelled due to banks from Mauritius, Sri Lanka and Russia reportedly securing approvals from the RBI for opening Vostro accounts with Indian banks to facilitate overseas trade in Rupee accounts.

India's trade with Djibouti, Namibia, Ethiopia, Kenya, and Cuba can be settled in Indian Rupees against the corresponding currencies of the respective countries. The other countries that are on the radar are Zimbabwe, Malawi, Sudan, Nigeria, and Tanzania. The African nations are rich in minerals and oil; however, they are deficit in food and medicines which can be filled by India. Indian electronic goods are also in high demand. Many countries in Africa are facing a shortage of Dollars. Trading in Indian Rupee will work to their advantage.

The Chinese are however, far ahead in the global acceptance of their currency. More than 50 countries have

close trading ties with China. Following the trade pact, bilateral trade is expected to increase from the current \$60 billion to \$100 billion in the next five years. The Reserve Bank of India asked banks to put in place additional arrangements for export and import transactions in Indian Rupees in view of the increasing interest of the global trading community in the domestic currency.

There are several objectives that can be achieved in allowing cross-country trade transaction settlements in local currencies. The use of rupee in cross border transactions substantially reduces risk for Indian businesses. It reduces the need to hold large foreign exchange reserves, avoiding a situation that Sri Lanka is currently facing. Having a strong Rupee bestows India with considerable clout among nations.

However, the imposition of EU sanctions on Russia has threatened to upend trade and supply chain. The objective of allowing cross-country trade transaction settlements in local currencies, is to cut down on foreign exchange risk for traders,

The Indian currency has been finding traction in international trade. Recently, Engineering Export Promotion Council of India, (EEPC) called for a Rupee-based trade financial arrangement with Myanmar. Both countries were willing for a bilateral trade in local currencies.

India will also explore with Belarus, for settling international trade in rupees. Belarus too is caught in the throes of the sanctions for supporting Russia's attack on Ukraine. India imports fertilizer from Belarus. Trading in rupees for settlement could help both the countries.

There is a marked trend among nations to free themselves from the yoke of the Dollar hegemony. Iran, Iraq, Venezuela are also planning to substitute the US national currency in oil trade.

The member states of the Eurasian Economic Union (EAEU) – Armenia, Belarus, Kazakhstan, Kyrgyzstan, and Russia increased the share of settlements in local currencies. Tajikistan, Uzbekistan, Mongolia, Turkmenistan, Iran, Turkey, Syria, and Tunisia are also reportedly planning to join the EAEU union. Asian nations,

Reserve Bank of India has approved 60 requests from correspondent banks in 18 countries, including the United Kingdom, Singapore, and New Zealand, to open Special Rupee Vostro Accounts (SRVAs). “We will soon start seeing operationalisation of this rupee trading in international trade with several countries,” says Piyush Goyal, Minister for Commerce & Industry.

including Singapore, India, Indonesia, Thailand, and Turkey are currently negotiating an FTA with the Union.

The EAEU is not the only alliance of countries willing to replace the US Dollar with alternative currencies in trade. The BRICS group (Brazil, Russia, India, China, and South Africa) of emerging economies have looked towards increasing settlements in local currencies.

The BRICS group of countries have been working to create a new reserve currency. The reserve currency will be based on the currencies of these five emerging market economies. To qualify as a reserve currency, several parameters need to be complied with.

- The currency must be from a country of considerable economic size.
- The country also must enjoy a significant position in the global market.
- The currency should have wide acceptance and enjoy robust trade.
- It should be stable and convertible into domestic currencies.

China has the largest sum of foreign exchange reserves in the world, holding over US\$ 3 trillion in reserves. The Chinese reserves along with the reserves of the other BRICS nations, could form a considerable heft to have a currency that could have a global influence. There is an attempt to slacken the dollar hegemony. In 2019, a quarter of the USD 15 billion of financial assistance in BRICS, was given in local currencies. The former chief of the New Development Bank of BRICS countries, had said that 50 per cent (of projects) should be

local currency financed. The US Dollar, currently is the predominant reserve currency, along with Euro, Chinese Renminbi, Japanese Yen, Pounds Sterling, Australian Dollars, Canadian Dollars and Swiss Francs.

The move for a common currency was earlier tabled by BRICS, in 2011, but fell by the wayside due to international exigencies. With the US using the sanctions as a punitive tool, there have been renewed calls for a common reserve currency. This time the Russians have led the call for the creation of a reserve currency that will be a substitute for the US Dollar as a global means for the settlement of international transactions.

The BRICS reserve currency is expected to reduce the reliance on the Dollar, Euro, and other currencies. But major hurdles remain. The present geopolitical situations are far from being conducive for creation of a parallel reserve currency. The Russian Rouble has been quite volatile with the breakup of hostilities. While the dollar has been gaining in strength, the currencies of other nations have been on a free fall.

China has been attempting internationalising the Yuan RMB. RMB is included in IMF basket. It has risen to fifth place as global currency and represents 15% of global currency holding. Russia has 25% of Chinese RMB in international reserves. The problem remains that the Yuan is not deep, open, and liquid enough for financial markets. At the same time, most countries would not want the Yuan to replace the dollar in its ability to manipulate trade to its advantage. Moving ahead currencies will be diversified however, with no currency maintaining complete hegemony.

In an increasing world of polarization, dependence on a single currency would be stultifying a country's own position. Internationalization of the rupee is the way forward. But to acquire that status there must be a critical mass of exports of goods and services. The Dollar accounts for 88.3% of the global foreign exchange market, Euro is around 39%, Renminbi is 4.3%. The rupee accounts for a mere 1.7%. India still has a long way to go, but without doubt, the rupee has begun to wield leverage. 

THE GREEN AND DIGITAL CORRIDORS NEW HIGHWAYS OF THE OCEAN

Green corridors function as 'special economic zones at sea'. They have nodal points for fuel production, and ship operations. They are supported with special policy and the regulatory environment. If successful, in terms of measurable reduction in the GHG emissions, the model can be replicated in other shipping routes.

BY VIJAY KURUP

A

t the COP27 climate summit, held recently at Sharm El-Sheikh, Egypt, the maritime community pledged for tighter regulation of Greenhouse Gas (GHG) emissions. The United States and Norway have set up the Green Shipping Challenge. The Green Shipping Challenge encourages countries, ports, companies, and other stakeholders in the shipping value chain to come forward with concrete announcements that will place the shipping sector on a course to align with the goal to limit global temperature rise to 1.5 degrees C. Countries, ports, and companies made major announcements on issues such as innovations for ships, expansion in low- or zero-emission fuels, and policies to help promote the constructions of next-generation vessels.

The COP26 summit held in 2021, brought together 200 countries, to accelerate action towards the goals of the 2015 Paris Agreement and the UN Framework Convention on Climate

Change. The aim of COP26 was to kindle the hope of limiting the global rise in temperatures. The effort was to keep the global average temperature to well below 2°C above pre-industrial levels and pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels.

The baseline of the pre-industrial era pertains to the period 1850-1900. Pre-industrial refers to global temperatures that were about 0.8 C cooler than now. But there is a school of thought, who believe that the pre-industrial period was between 1720 to 1800. However, 1850-1900 was chosen because there was more record of temperatures that were being maintained from this period onwards, worldwide.

What has COP27 achieved? It was found that the progress thus far was not commensurate with the goals set of capping the rise in temperatures. The maritime sector, ranks among the highest emitters of carbon, nitrogen, and sulphur compounds into the atmosphere. Composition wise, GHG emissions consist of Carbon dioxide (CO₂); Carbon monoxide, Methane (CH₄); Nitrous oxide (N₂O) and Fluorinated gasses.



However due to lack of concerted effort, force majeure situations such as heatwaves, flooding, droughts, wildfires, and the war in Ukraine, have made the progress imperceptibly slow. If no concerted action were to be taken, then by 2050, emission levels from this sector are projected to be up to 50% of 2018 levels.

The COP27 has gone a step further in delineating the actions taken by countries and major multinational companies to decarbonize the supply chain. The meet had elicited commitments from Governments, major conglomerates, and shipping lines. Forty major announcements have been made. Some of these include:

- The Maritime and Port Authority of Singapore (MPA), Port of Long Beach, Port of Los Angeles, and C40 Cities are coming together to establish a green and digital shipping corridor on the transpacific route, between Singapore and the San Pedro Bay port complex. C40 is a network of mayors of nearly



100 world-leading cities collaborating to deliver the urgent action needed to confront the climate crisis. The three ports and C40 Cities will work closely with other stakeholders in the maritime chain.

- The focus will be on: (i) low and zero carbon fuels and bunkering, and (ii) digital shipping and efficiency to support deployment of low and zero carbon ships. The Port of Los Angeles, MPA, Port of Long Beach and C40, hope to rope in other key players in the maritime and energy value chains.
- On January 28, 2022, the Port of Los Angeles, Port of Shanghai, and C40 Cities announced a partnership of cities, ports, shipping companies, and a network of cargo owners to create the world's first green shipping corridor – the Los Angeles – Shanghai Green Shipping Corridor.
- The trans-Pacific trade route, from the far east to the US West coast, is one of the busiest sectors. In 2020, about 19,000 ships travelled across this

stretch, representing 30% of global container traffic. The Suez Canal also handles around 30% of global container traffic. The trans-Pacific is one of the most carbon-intensive shipping corridors in the global maritime sector.

- Australia has signed a Green Economy Agreement with Singapore, to support and accelerate transition to net zero emissions. The agreement includes a specific initiative to cooperate on green shipping, and focus on joint efforts to accelerate implementation and promotion of technologies for decarbonising shipping. This initiative aims to establish the business / government / research partnerships required to implement green shipping corridors. Employ technologies like use of clean hydrogen to reduce emissions in maritime and port operations. The total investment is US\$ 30 million.
- The Green Corridor Between Belgium and Sweden is in the advanced stage of completion. The port authorities have agreed on using alternative fuels and facilitating bunkering regulations. They expect to launch the green corridor for seagoing vessels by 2025. As an incentive, discounts on port dues would be available for green vessels and those using cleaner fuels.
- The Republic of Korea and the United States have announced technical cooperation to help facilitate establishment of a green shipping corridor. Representatives from both the Governments will undertake a feasibility study to explore the potential of creating a green shipping corridor between the two major cargo ports in Korea and the United States.
- MPA Singapore and Port of Rotterdam have inked a MoU to establish the world's longest green and digital corridor to enable low and zero carbon shipping. This would be the world's longest green and digital corridor. The MoU signed between the two nations, will bring together stakeholders across the supply chain to realize the first sustainable vessels sailing on the route by 2027. Singapore and Rotterdam are among the largest bunkering ports in the world, making them influential players on the Asian-

European shipping lanes.

- The Prime Minister Narendra Modi has committed to a graded five-point response or 'Panchamrit' towards stemming the global rise in temperatures. The timeline India has set for itself is 2030.
- First- India's commitment is to take non-fossil energy capacity to 500 GW by 2030. Just for information 1 GW is equal to 1 billion watts (the unit of power). 1GW can power 100 million LED lights.
- Second-India will meet 50 percent of its energy requirements from renewable energy in the same period.
- Third- India will reduce the total projected carbon emissions by one billion tonnes from now till 2030. According to a report, 1 million tonnes of carbon is equivalent to charging 321 billion smartphones or producing 4.4 million laptops.
- Fourth- By 2030, India will reduce the carbon intensity of its economy by less than 45 percent.
- And lastly by the year 2070, India will achieve the target of Net Zero.
- DP World plans to invest up to \$500 million across its business to cut CO2 emissions by nearly 700,000 tonnes over the next five years. This planned reduction in carbon emissions represents a 20% cut from 2021 levels. Their plans include replacing its global fleet of assets from diesel to electric, investing in renewable power and exploring alternative fuels.
- Amazon stands committed to accelerating the adoption of new solutions that are going to decarbonize ocean shipping. They have indicated their demand for zero-carbon services and fuels to the value chain for Zero Emission Vessels. They hope to see a decarbonized ocean shipping by 2040. To that end they seek to purchase bio-based fuel service to help reduce carbon emissions. Investment in technologies for longer-term, zero-emission solutions through their US\$ 2 billion Climate Pledge Fund.
- A.P. Moller – Maersk and the Spanish Government are looking to explore the opportunities for large-scale green fuels production in Spain. If implemented in full, the collaboration

could deliver up to 2 million tons of green fuels per year. The project aims to explore the feasibility of creation of renewable energy sources to bunkering of vessels. The production locations are likely to be in the regions Andalusia and Galicia.

- Maersk alone needs approximately 6 million tons of green methanol per year to cover its 2030 milestone fleet emissions target by 2030 and even larger amounts to reach net zero for its entire fleet to reach net zero by 2040. Maersk had advanced its decarbonization commitment from 2050 to 2040. Nineteen vessels are currently earmarked for running on green methanol that Maersk will put in operation during 2023-2025 that would require an estimated green fuel of 750000 tonnes.

Green corridors have multiple definitions. The Energy Transitions Commission and the Global Maritime Forum refer to them as “specific trade routes between major port hubs where zero-emission solutions are supported. The U.S. Government has a more broad-based definition. It defines them as “maritime routes that showcase low- and zero-emission lifecycle fuels and technologies with the ambition to achieve zero greenhouse gas emissions across all aspects of the corridor in support of sector-wide decarbonization no later than 2050.” The emissions reductions should be quantifiable and measurable.

Green corridors function as ‘special economic zones at sea’. They have nodal points for fuel production, and ship operations. They are supported with special policy and the regulatory environment. If successful, in terms of measurable reduction in the greenhouse gas emissions from ships, the model can be replicated in other shipping routes.

These corridors are digitally enhanced to eliminate paperwork and increase efficiency. Digital tools such as APIs will be structured into the system to not only support deployment of low- and zero-carbon ships, but would also entail improvement in data flow in container shipping. But digital synchronization across the length of the supply chain is still a challenge. The seamless transmission of data from one

Green and digital shipping corridors (GDSC) were in focus at the opening of Singapore Maritime Week with the signing of an agreement between the city state and the Ports of Los Angeles and Long Beach. This is the second green corridor that Singapore has signed following the world’s longest with the Port of Rotterdam in August last year.

system to another, across geographical borders between multiple stakeholders along the supply chain is still beset with problems.

Once the APIs are established there would be substantial improvement in visibility for freight solutions providers giving them real-time responsiveness and as a result, greater reliability, and a better customer experience.

With the availability of the standardized data via APIs, solutions providers, freight forwarders and other third parties can easily integrate real-time data into their internal systems which makes their operations vastly more efficient.

The main workhorse document that concerns here is the Bill of Lading (BL). Adoption of an eBL by regulators, banks and insurers is still a way off. It has been around for almost two decades, but has resisted all attempts to enter the system. Its adoption into the digital world would greatly enhance the speed of operations along the length of the chain.

Alternative fuels have their own challenges. What makes a good fuel? An ideal maritime fuel should have several attributes. It should be an efficient energy carrier. Have high energy content. Safe to use and store. Its production should be cost competitive and should have minimal environmental impact.


Shipping lines largely use Marine Gas Oil (MGO) and low-sulphur fuel oil. Sustainable alternatives such as biofuels, including biogases,

are increasingly being used. Other alternatives such as chemically synthesized methane, hydrogen, and hydrogen-based fuels including ammonia and methanol are still in the trial stage. However, its utility as a green fuel would depend on whether or not the process produces GHG during production.

Several clean fuels are emerging for maritime applications. Hydrogen is the most abundant element. It is present in water. Every molecule of water has two atoms of hydrogen. It has the highest energy content of all chemical fuels. Hydrogen can be produced through renewable energy, which makes it a zero-GHG emission source of fuel. It is highly combustible and not easy to store.

Ammonia is a compound of 3 atoms of hydrogen and 1 atom of nitrogen. Ammonia is a good source of hydrogen. Ammonia is easier to store than hydrogen. Production of Ammonia is also through renewable energy. Pilot projects for production of ammonia as a fuel are progressing, but it is not yet usable on an industrial scale.

Methanol is an organic chemical that has four atoms of hydrogen for every molecule of methanol. It can be made from corn and other plant materials. Methanol is already available as a shipping fuel today; however, its future as a zero-GHG emission fuel depends on how it is produced. Different fuels bring in their own limitations. A solution acceptable to all needs to be found.

Today, shipping is powered almost entirely by fossil fuels, with the industry accounting for 2-3% of global CO2 emissions, a figure that could rise to 17% by 2050, if left unregulated. However, recent advancements in zero-carbon shipping fuels and zero-emissions technologies means decarbonising the industry by 2050 is now a realistic goal. The first sustainable vessels sailing from Rotterdam to Singapore is expected to take place by 2027. It would be a giant step for mankind. It recalls Neil Armstrong’s first words, when he stepped on the moon - both achievements are of equal importance. In this instance the future survival of the earth is at stake. 

T

he dice has been rolled. The European Union has banned all seaborne Russian crude imports from 5th December, followed with a fuel import ban in February. It is an extraordinary and unprecedented situation. The world now awaits, with bated breath, for the ball on the global roulette wheel to come to a halt. To what extent will the sanctions affect the movement of oil and petrochemical trade? Would the movement of oil and petrochemicals be severely upended? Will the sanctions bite to prevent India sourcing its crude from Russia?

Background

Following its invasion of Ukraine by Russia, 27 countries of the European Union have agreed on a price cap of US\$60 a barrel on Russian seaborne oil, to deplete the Kremlin's financial resources, by going after the Kremlin's biggest money-maker, oil, and natural gas. In order to soften the blow of disruption on oil markets, the cap had a grace period up to 5th Jan 2023, for crude oil that was loaded before 5th Jan and was scheduled to arrive at destination before Jan 19th. The ban does not apply if the crude oil or petroleum products are purchased at or below the oil price cap.

The cap price is the value of the crude, when the crude is loaded onto a vessel. It does not include the cost of transportation. It will apply from the time the cargo is received onto a ship till it is passed through customs in the receiving country. Any vessel contravening the provisions of the sanction will face numerous penalties. The EU operators will be prohibited from insuring, financing, and servicing this vessel for 90 days after the cargo has been unloaded. The EU flagged vessels will be subject to penalties according to national legislation. The EU is already working on a penalty of 5% of global turnover for companies that break its sanctions.



THE SWORD OF SANCTIONS

The flow of Russian oil has changed its course towards Asia. The first wave of European sanctions appears short in its effort to curb Russian energy exports. India, China and Turkey are cashing on the situation, while an uncertain world awaits for the dust raised by sanctions to settle down.

BY VIJAY KURUP

The EU has closed its ports to Russia's entire merchant fleet of over 2800 vessels. However, the measure does not affect vessels carrying:

- Energy
- pharmaceutical, medical, agricultural and food products
- humanitarian aid
- nuclear fuel and other goods necessary for the functioning of civil nuclear capabilities
- coal

The measure also does not affect vessels in need of assistance seeking a place of refuge, or vessels making an emergency port call for reasons of maritime safety or saving life at sea.

The ban will also apply to vessels that try to evade the sanctions by changing their Russian flag or

registration to that of another state. Port authorities can identify an attempt to reflag or change registration by checking a vessel's IMO number. The unique identification number assigned on behalf of the International Maritime Organization.

Post sanction, oil tankers carrying Russian crude oil and petroleum products will have to have the maximum sanction price tag of US \$60 per barrel, if it is to have the insurance coverage from the traditional European markets. The limit only applies to crude oil transported by sea. Further energy is not sanctioned. Russia has steadfastly maintained that it will not sell oil to countries that participate in the price cap. The US and the UK have banned Russian crude.



Many countries continue to import oil from Russia along the Druzhba pipeline. Druzhba Pipeline is one of the biggest crude oil pipeline networks in the world. The 5500 km pipeline begins in Russia to various points in Europe. The current capacity of Druzhba is 1.2 to 1.4 million barrels a day. Further up to 1.5 million barrels a day of oil from Kazakhstan is shipped from a terminal close to Russia's Novorossiysk port. The supply of oil from the pipelines is not banned.

The energy industry is particularly vulnerable. The energy situation is globally poised on a knife edge. Even before the Russian invasion, global energy demand was inching ahead of supply. By 4th quarter 2021, the excess demand peaked at 2 million barrels/day. The deficit was expected to close by second quarter 2022.

However, several factors have voided these assumptions. Beginning with the outbreak of hostilities. The recent supply disruption in Libya had resulted in almost 550,000 boe/d (barrels of oil equivalent per day) being curbed, which did not improve matters; OPEC and allies have agreed to adhere to their October plan to cut output by 2 million barrels per day (bpd) from November through 2023; Qatar's LNG plants will not be able to increase their output any further since it is already operating at full capacity.

Russia wields considerable influence on the global oil and gas industry. Russian crude oil production is third in the world, after Saudi Arabia and the USA. It is the world's second largest

producer of gas. Russia dominates the natural gas export market. Of the 762 billion cubic meters of natural gas produced in the country in 2021, 210 billion cubic meters were sent abroad. The bulk of Russia's gas comes from Gazprom and Novatek.

How effective will the sanctions be? The G7 nations – Canada, France, Germany, Italy, Japan, the UK, and US – provide insurance services for 90% of the world's cargo while Greece, an EU member state, is a major player in the shipping industry. Ships are covered for disasters such as oil spills through the International Group of P&I Clubs. With the implementation of sanctions insurance would be denied to those that do not adhere to the price cap. Many of the world's biggest shipping and insurance companies are headquartered in G7 countries. Companies in the EU, the UK, US, Canada and Japan as well as Australia are banned from providing services enabling maritime transport, such as insurance, in cases where the price cap has been breached.

Russia had so far been able to ship much of its seaborne shipments to China, India, and Turkey, albeit at discounted rates, but close to the price cap. However, post sanctions Indian refiners are waiting and watching to see how the proposed G7 price cap mechanism pans out. Reportedly Reliance Industries Ltd and Bharat Petroleum Corporation are yet to place orders for crude post sanctions.

A traffic jam of oil tankers had recently built up in Turkish waters with Turkey's government demanding

proof of insurance cover. The number of tankers waiting in the Black Sea to cross Istanbul's Bosphorus strait rose to 20, carrying 18 million barrels of crude oil. Turkey's maritime authority said it would block all oil tankers without appropriate insurance documents. The tankers in the Black Sea, mainly carry crude and chemical, from Russia to India, the UAE, and China. One of the tankers awaiting clearance was a Turkish flagged vessel underscoring their intentions of not succumbing to partisanship.

Though the P&I cover is for vessels adhering to the sanction mandates, Turkey is demanding additional checks on ships passing through its territorial waters.

The current round of sanctions is not the end. The EU nations are discussing the next tranche of sanctions that is targeted to further restrict investments on bank, exports, and technology.

India along with China are the two of the biggest consumers of oil, have eschewed from participating in the sanctions. India's position as stated by petroleum minister, Hardeep Puri, is that, "India will buy oil from Russia, we will buy from wherever." Post Russian invasion, India had steadily increased its purchases of discounted Russian oil, with imports reaching record high in October. India will continue buying Russian oil. The sanctions permit purchases, but the concomitant maritime services, insurance cover brokering from the western counterparts, will not be available.

Puri has gone on record to state that the country's exposure to Russian oil was not significant enough for India to be affected by the price cap on Russian oil. He said that India now sources oil from 39 countries, with Iraq, Saudi Arabia, United Arab Emirates, Kuwait, and Russia among the top suppliers. Imports from Russia previously were only a negligible part of India's purchases. However, with the outbreak of hostilities import oil shipments had steadily risen. Crude petroleum, fertilizers, Petroleum products, coal coke and briquettes had registered sharp increases. Reportedly global oil producers have assured India that there will be no disruption in supply. India consumes 5 million barrels a day,

which is expected to go up to 9 million barrels a day.

What do Indian importers risk in importing cargo from Russia? A Marine Cargo Insurance and Marine Hull Insurance specialist who did not want to be identified, speaking to Maritime Gateway said, "Currently, Russia is exporting oil to India on a terms of sale called DAP (Delivered at Place). As per these terms the risk of loss or damage (contamination) to oil remains with the Russian seller till it is delivered at an agreed place in India (presumably an Indian port or anchorage). This means the Russian sellers will insure the shipment, not the Indians."

He added, "Indian importers have, of course, the option to import on FOB or CFR basis but there are risks in doing so when US sanctions are in force. For instance, the Reinsurers (other than GIC) may not provide reinsurance protection to Indian insurers. The Indian insurers have created a pool and the risk may be placed within the pool. However, if there is a casualty to the ship, will it be able to dock at a nearby safe port for dry docking or repairs? Will reputed salvors render salvage services under Lloyd's Open Form of Salvage (LOF) which incidentally has a UK arbitration Clause?"

It was a situation fraught with uncertainties. He said "Again, in case of a major claim, the insurers will upon payment of claim exercise their right of subrogation and initiate recovery action against the Sea Carrier. This again will become difficult unless the ship is entered with a P&I Club covering the carrier's liability for cargo loss or damage."

He then asked, whether the Russian vessels (or vessels chartered by Russian Suppliers) have a P&I Club entry with a reputed International Group (IG) of clubs? He continued, "One would also not be sure where the ship itself is insured and the quality of its insurers. This is a vital consideration since it gives insurers an option to freeze the insurance claim amount payable to the ship following a casualty by way of a Mareva Injunction) unless the cargo owners are given a security in the form of a Bank Guarantee or Club Letter of Indemnity."

His suggestion was that with all these complex issues, continuing to buy on DAP terms seems the best option. The Indian importers then must insure only the transit via pipelines after the ship has arrived at an Indian port. This risk is being insured under the pool created by Indian insurers at a reasonable rate of premium. As there are no sanctions agreed by the Indian government, the Indian insurers can avail of the pooling arrangement which utilizes the combined capacity of the Indian insurers to overcome the need to reinsure abroad. So far, there are no 'secondary' sanctions imposed by the United States so that Indian insurers cannot be penalized if they insure Russian oil.

The Russians have made several moves to keep the oil flowing. The market for old oil tankers is booming. With the western shipping companies stepping back from offering their services, new shipping companies have sprung up in defiance of the sanctions. Old tankers that might normally be scrapped are now being refurbished for use.

A burgeoning shadow fleet of oil tankers has emerged to ship Russian crude oil. A growing number of vessels are registered to unknown owners, and the scrapping of old tankers has all but halted. Since the war broke out, a bevy of new traders have been marketing Russian oil to buyers in Asia, as traditional entities stepped away. They have reportedly developed a fleet of shadow tankers. The number of Russian-affiliated oil tankers are "going dark" to avoid being tracked. The insurance coverage of these dark fleets are suspect. Which insurer is covering them? To what extent are they covered in the event of major catastrophes such as oil spills etc.


Russia has stepped in to provide insurance cover. India and Turkey were initially utilizing their services to insure their crude shipments. India has accepted Russian coverage of insurance of its vessels. Chinese authorities are yet to recognize Russian insurance. Further India has come to an agreement with select foreign nations to settle trade in rupee terms through Vostro accounts of

foreign banks in India.

The final link in the paperwork of the supply chain, after insurance, is providing safety certification for vessels. With the sanctions being imposed the four leading IACS members, from the UK, Norway, France, and the United States, have stopped services to Russian companies.

IACS assists international regulatory bodies and standard organizations to develop, implement and interpret statutory regulations and industry standards in ship design, construction and maintenance with a view to improving safety at sea and prevention of marine pollution. Its mission is to establish, review, promote and develop minimum technical requirements in relation to the design, construction, maintenance and survey of ships and other marine related facilities. In other words, it is mandatory for any vessel to have this certificate in order to have an insurance cover. The safety certificate along with the insurance coverage gives vessels access to any port.

The Indian Register of Shipping (IRClass) has stepped in to provide safety certification for dozens of Russian ships. It is one of the world's top classification companies, and provides a final link in the paperwork chain. The IRClass has certified more than 80 ships managed by SCF Management Services (Dubai) Ltd, subsidiary of top Russian shipping group, Sovcomflot.

What does this all entail? How will the world tide over the crisis and at what expense? Can non fossil fuels such as renewables, nuclear energy and natural gas, be an alternate source of energy? Nuclear and renewable sources of energy are not sufficiently widespread to step into the void, if it were to be created. The OPEC and allies' decision to reduce output through 2023 also will not help matters. The only source left is coal. There could be a rise in the use of coal to meet the energy needs. If that were to happen, it would be at a huge expense of commitment to decarbonization. It is a period of uncertainty. The dust raised by the sanctions is yet to settle down. The ball on the roulette wheel is yet to fall into a slot. There are anxious faces waiting in apprehension. 



COAL SUPPLY IS THE LIFELINE

On one side the domestic aluminium sector is struggling with inadequate supply of coal and high logistics cost, on the other side inflow of cheap and inferior quality imports is further impacting the domestic producers.

Recently, industry body FICCI has sought an increase in the import duty on aluminium and aluminium products to at least 12.5% in the current budget 2023-24, stating that the move will help curb dumping of aluminium products and encourage growth of the domestic manufacturing and recycling. The present import duty on aluminium and aluminium products stands at 10%. Aluminium producers have also requested the government to reduce Customs duty on critical raw material such as caustic soda and aluminium.

Of late, the aluminium industry in India has been struggling with a slump in global demand, rising production and logistic costs, a deluge of imports,

and declining market share. There has been a visible surge in subpar aluminium imports, especially from China which constitutes over 85 per cent of downstream aluminium imports at present. Moreover, India is also seeing aluminium imports from the US, the UK, Malaysia and the Middle East. Several of these nations support their domestic industries with concessions and benefits, including low interest loans and cheaper power tariffs.

Perhaps, this explains the need to curb aluminium imports and safeguard the domestic market. But, let us first understand the current scenario of the Indian aluminium sector.

Aluminium is a resilient metal that retains its fundamental properties even when recycled, hence it is widely utilised across diverse sectors. Globally, in Aluminium production, China occupies the number one position, with an annual output of 47 million tonnes. India occupies the second position with an output of 4million tonnes (about one-tenth of the Chinese capacity). Main producers of Aluminium in India are

NALCO, HINDALCO and Vedanta. About 70% of the total domestic production is happening in Odisha, where these major players also have their production units. Some production units are also located in Chhattisgarh, Madhya Pradesh, and Uttar Pradesh as well.

In the Aluminium sector, about 40% of the production cost is associated with power consumed. Each production unit has its captive power plant and so thermal coal logistics accounts for a major chunk of the total production cost. Compared to any other coal consuming sector, the Aluminium sector today struggles to get its required quantity of coal. Now, many of the coal mines are not connected by rail tracks. So, multimodal logistics has to be used, wherein the coal is dumped into trucks at the mine head and is moved till the rail terminal, where it is again loaded into wagons for further journey to the aluminium plants. This multiple handling further adds to the cost. Just about 50% of the coal mines have direct rail connectivity.

Movement of coal by trucks is a huge challenge, as road infrastructure in the remote areas near the mines is not fully developed, so bigger sized trucks cannot ply. Adding to the woes are the union issues, wherein the unions deliberately do not allow the use of bigger efficient trucks. For other commodities moving by trucks, if the cost is ₹2 per KM, per tonne, then for coal it is 2-3 times higher.

Comparatively, in China and Russia the power cost is less and further for industrial consumption it is subsidised. In Russia, majority of the power is generated through hydro-based systems, which reduces the cost of generation. In India, hydro-power is just 8-10% of the total power produced,

further hydro-power is not available for the Aluminium industry.

Last year during summer, some of the Aluminium plants had to stop their production units due to coal shortage, which is a very tough and environmentally challenging situation. For example, if the steel plant or a cement plant has to temporarily halt production due to paucity of coal, it is not severely impacted as they can restart production in a week's time, but an aluminium production unit if it has to halt production operations for just two hours for shortage of coal, then to restart the plant it will take almost six months.

Another concern is the transportation of aluminium. All the three producers use the most modern facility. It's a completely closed system, highly automated, for moving Aluminium, but the rail freight is high compared to China or Russia. Indian rail freight cost is almost double the global average. This increases the cost of Indian Aluminium in the global market, making it less cost-competitive.

Indian Aluminium is mostly exported to Korea, Japan, Europe and USA. Exports are mostly shipped through the east coast ports of Visakhapatnam and Yamaprasad Mookerjee Port. A small quantity also goes through Gangavaram Port.

In a representation made through the Aluminium Association of India, the producers said curbing cheap imports and making domestic aluminium cost-competitive in global market is absolutely necessary to battle current challenges being faced by the industry in sustaining the share of the domestic aluminium demand – which

is today being imploded with imported aluminium – as well as to make Indian aluminium more competitive in global markets to retain and boost exports. These challenges have been further compounded by the Covid-19 pandemic, which has adversely impacted the domestic demand for aluminium, the association said.

At the same time, the industry is not able to compete effectively in the global markets as the burden of Central and state taxes and levies amount to 15 per cent of aluminium production cost. FICCI has also demanded rationalising the inverted duty structure on several key materials from 7.5 per cent to 2.5 per cent to encourage domestic manufacturing and combat the dumping of imports.

It has also recommended elimination of cess on coal in a bid to support highly power-intensive industries like aluminium.


Imploding imports

Though India has sufficient domestic capacity of 4 mtpa (million tonnes per annum) to cater to the country's aluminium demand, 60 per cent of India's demand is being met through imports, resulting in declining domestic market share from 60% in FY11 to 40% in FY20.

Total imports, including scrap, for the FY11-20 period has grown at a CAGR of 10%. Between FY14 and FY19, imports from non-FTA (free-trade agreement) countries grew at 11% and from FTA countries at 23%.

Scrap saga

The US imposed 10% tariffs on aluminium imports, while China imposed 25% duty on aluminium scrap imports from US. This led to dumping of aluminium scrap into India. Due to lack of an organised domestic scrap-recycling industry, post the Chinese tariffs on scrap, India is at severe threat as US diverted large volume of scrap to India, since EU and other developed countries have stringent standards for scrap, the association said.

Aluminium is largely used in automobile, aviation and electronics sectors. Thus, protecting it from inferior quality imports is imminent to support make in India. 





LINER CONTAINER AND THE LEASING INDUSTRY SHORTAGE TO SURPLUS TO WHAT EXACTLY?

The effect of the now hastened attrition of the container fleet combined with the effective reduction in slot capacity because of the MARPOL amendments and vessel scrapping, could well result, ceteris paribus, in a "balance" of sort being restored to the anticipated skew in the supply-demand situation in 2023-24-25.



BY V K RAJAKRISHNAN

A

lot has been said in the recent past by various experts about "shortages", "lack of availability" and recently, "surpluses" of freight containers and the prognosis of the general health and well-being of the Liner Container industry going forward into 2023 and beyond.

It is reasonably agreed though, across the board, that the Liner Container industry will post healthy margins in 2022 and possibly 2023 as well.

The extraordinary equipment imbalances that started to manifest in

the mid 2020's because of lockdown induced blank sailings from Asia and which continued through 2021 because of Port congestion at W Coast North America and European Ports, created an abnormal buildup of empties at the light leg ends of the trade lanes quite simply because the vessels that would normally retrieve between 60-80% of the equipment imbalance on the return voyage never showed up.

Roughly, the 800 odd blank sailings would have created a backlog of about 8-10% of the world's container fleet at the non-business end of the chain.

The resulting "non-availability" of containers at head-haul Ports across Asia was quickly termed a "shortage" by the experts and by Politicians across the spectrum and the consequent knee-jerk reactions by the usual bureaucratic set across the world ended up in a futile attempt to tackle this issue.

Following the onslaught of Covid-19 on personnel manning Ports, Trucking and warehousing industries, productivity at major receiving and loading Ports suffered adversely, thereby exacerbating the "shortage" at the loading Ports.

China's zero-Covid tolerance policy did not help the creation of fresh loading opportunities at the head-haul end and neither, for that matter, did the prevailing high inflationary trends that have impacted most of the World for various reasons including, but not limited to, the Russia-Ukraine conflict and its effect on the procurement of food-grain and other commodities as also, oil prices/production vagaries.

The effect of reduced demand in the United States of America (the world's largest consumer) and Western Europe, depressed export volumes from Asia and once again, empty-container Depots are filling up, freight rates reducing rapidly, utilization levels dropping and the Shipper, beginning to heave a sigh of relief from high costs.

The question is, how long would this respite last?

Which brings us to Fourth Quarter 2022.

The general belief is that there is an excess of containers in the market.

This is a fact for the reasons pointed

out below, and that things look quite gloomy.

This presumption, however, does not take into account the structural strength, state of seaworthiness and cargo worthiness of the current “surplus” of containers.

Numerous anecdotal incidents indicate that unless CSC norms are strictly enforced by Lines, Ports and the Administration, accidents are just waiting to happen because of substandard containers being used to carry CSC payloads on sea, road, and rail networks.

This situation will only hasten the logical demise of about 6-8 million teu that were pressed into extended use during the Covid/post-Covid “shortage” and are now well past their “use-by” dates. The natural attrition rate of the container fleet, assuming a lifespan of 12 years across owners/lessors would imply that about 8% of the fleet should retire annually.

At a global container fleet strength of about 45 million teu, the annual attrition rate should be about 3.5-4 million teu. This implies that about 4 million teu which should have been retired annually had not since mid-2020.

They will retire now

The next few quarters will most likely see about 7-8 million teu dropping out of circulation and bearing in mind that China's annual production capacity is about 7 million teu, over one full year's worth of production at full-tilt (Covid zero-tolerance excepted) is very likely to disappear from the system.

2023 Shape of things to come:

Assuming a conservative growth rate in World GDP of about 2.2-2.5%, at the current multiplier, merchandise trade growth of about 4-4.5% is likely and the impact of the reduced available container fleet through forced attrition is something to be re-considered.

There is, however, a new variable on the capacity side which is very likely to seriously upset the status quo:

January 2023 heralds the entry of the following jargon into ship-operating lexicon:

EEXI Energy Efficiency Existing Ship Index



CII Carbon Intensity Indicator
SEEMP Ship Energy Efficiency Management Plan
AER Annual Efficiency Ratio

To the uninitiated this sounds unintelligible, but it seems evident that Amendments to MARPOL Annex VI which will come into effect in January 2023 will have severe repercussions on vessel operator efficiency and operating indicators.

All ships would be mandated to calculate and publish their EEXI and follow technical means to improve energy efficiency. Part III of the SEEMP will list targets and implementation plans and measures that need to be deployed.

Without going into technical detail, this implies that ships would be required to limit their shaft power, restricting maximum power (including maximum power for contingencies) that can be generated.

Ergo: Reduction in steaming speed

It is estimated that a normal long-haul deployment of tonnage would need between 7-15% more tonnage than earlier to maintain the same capacity. In other words, depending on the number of vessels in a string and the operating contingency margins, at least one or more additional vessels would be needed to provide similar coverage – traditionally, weekly port coverage.

The projected intake of tonnage into the container liner trades during 2022-2025 is estimated to add about

19% to available container slot capacity if current orders are maintained and ignoring scrapped tonnage. The new dispensation is estimated to effectively neutralise this fleet increase between 7-16% and thereby match projected merchandise trade growth.

Summary

In summary, the effect of the now hastened attrition of the container fleet combined with the effective reduction in slot capacity because of the MARPOL amendments and vessel scrapping, could well result, ceteris paribus, in a “balance” of sort being restored to the anticipated skew in the supply-demand situation in 2023-24-25.

Imponderables such as the Russia/ Ukraine effect, global inflation/recession etc. remain to ensure that there are interesting times ahead for Container Liner shipping and the leasing industry.

Easing of hostilities and consequent normalizing of supply chains, reduced inflationary pressure, and increasing demand could well alter the equation quite significantly increasing Shipper costs all over again.

Unless cost reductions are achieved by improved efficiencies elsewhere in the logistics chain, Shipper costs are likely to increase again with every likelihood of a scenario where scrapped containers, longer turn times on vessel deployments, increase numbers of ships etc. putting pressure on container availability yet again.

Interesting times indeed.

METHANOL MOVES INTO THE MAINSTREAM OF SHIPPING'S ENERGY TRANSITION

Shipowners seeking options for decarbonization are choosing Methanol as a powerful solution for the short and long term, writes Chris Chatterton, The Methanol Institute

The shipping industry's energy transition is picking up speed and its leading players are choosing Methanol as the fuel that can deliver short term emissions savings and play a long term role in decarbonization.

The pioneers in this space include Waterfront Shipping, Stena/Proman, NYK and MOL which have built a series of Methanol carriers that use a segregated portion of the cargo as fuel. This helped to prove the concept that Methanol could be safely loaded, stored and used as fuel, delivering immediate reductions in SOx, NOx, Particulate Matter and carbon emissions.

The leadership in the containership sector subsequently shown by AP Moller-Maersk in ordering a series of Methanol dual-fuelled ships indicated that large owners are prepared to take the decarbonization challenge seriously. Maersk's initial tender for 13 container ships of 16,000 teu has since expanded with orders for a further six 17,000 teu ships. It is reported seeking to expand on

its previous order for one feeder ship and has enquiries in place with yards for up to 18 Methanol-fuelled 2,600-teu ships.

Since then, the trend line continued upwards, recently taking a swing northwards with operators including CMA-CGM, X-Press Feeders, China Merchants and the biggest shipping company in the world COSCO, all placing firm orders.

China Merchants Energy Shipping and COSCO Shipping Bulk last year indicated that the two companies will jointly focus on Methanol marine fuel as their primary area of research in the future.

China has set targets to achieve peak carbon and ultimately carbon neutrality and several government ministries have referenced low carbon and renewable methanol development from green hydrogen and methanol-fuelled vessels as key enablers for these policies. This places Methanol at an entry point on the transition curve where two leading Chinese companies can reduce GHG emissions and achieve carbon neutrality in the longer term.

Elsewhere further orders have been announced by Oslo-listed boxship owner MPC Container Ships which has contracted two dual-fuel Methanol-



powered 1,300 teu newbuilds at Chinese-based shipyard Taizhou Sanfu Ship Engineering.

Analysis from class society DNV shows that Methanol was the second most popular alternative fuel choice for newbuilding orders in 2022 after LNG, with 35 ships ordered, bringing the total count to 82 ships.

The new year has seen no slowdown in the momentum with the liner sector once again leading the way. South Korean flagship carrier HMM is the latest container line to move to methanol, announcing orders for nine 9,000 teu vessels, which will be delivered between 2025 and 2027.

Hyundai Samho in South Korea also announced a \$2.05bn order for 12 methanol-propelled large boxships – all due for delivery by the end of 2026. The



Methanol also has technical advantages compared to other fuels. The recent interest in Methanol for newbuildings reflects the fact that Ammonia is viewed by many observers as far more difficult to implement safely and sustainably – and regulatory approval may still be many years away.

Methanol is a liquid fuel, able to be stored and transported without the need to cool or keep it under pressure. Easier to handle and more widely available than Ammonia, Methanol is simpler to bunker, with a variety of supply options and established best practices and guidelines for bunkering.

On an energy equivalent basis, Methanol has been competitive with marine gasoil for the past five years however, there is a need for stronger policy to encourage vessel owners and operators to adopt cleaner fuel in greater numbers.

Most of the currently available Methanol sourced from natural gas has a similar 'in service' carbon reduction to LNG as well as having no SOx emissions, very low PM and NOx emissions that can be abated with water treatment.

Blue methanol, produced in combination with carbon capture and storage, offers a lower emissions profile. Production of green methanol sourced from biomass or from captured CO₂, renewable electricity sources and green hydrogen is small but growing as producers recognise the demand signal being sent by the shipping industry.

The Role of Ports

Ports are vital to shipping's energy transition and their role in a net carbon neutral future is set to grow as more of the fuels needed to support a low carbon industry are produced in port locations. The much-touted 'green corridor' concept is founded on the availability of low and carbon-neutral fuels at set points in the global logistic chain, giving owners confidence that the fuels they need will be available to bunker their vessels.

While conventional methanol produced from natural gas is widely available at more than 100 of the world's leading ports, the production of renewable products is currently low.

Ports hold the key to providing the

yard did not reveal the identity of the owner, with sources tipping CMA CGM and Maersk as likely repeat customers.

Methanol is making waves in other sectors too. New designs for Methanol dual fuel tankers and bulk carriers have been increasing as operators understand more about its potential to reduce their carbon emissions and begin the process of compliance with global carbon reduction goals.

Among the most significant was the move by commodities giant Cargill and trading house Mitsui & Co to order two Methanol-powered Kamsarmax bulk carriers at Japan's Tsuneishi Shipbuilding with vessels scheduled to deliver in the first quarter of 2026.

With more owners exploring Methanol as a fuel option, main engine makers report full order books for new

units and increasing interest in retrofits and conversions of existing engines.

These shipowners have recognised that Methanol provides them with huge flexibility in introducing a low-pollution, lower carbon fuel which is closest to a drop-in available in the market. This means a lower upfront capex cost, especially when compared to LNG as fuel which attracts a considerable premium, largely due to the expensive cryogenic fuel tanks and gas handling systems.

Technical Advantages

Methanol is a product with a highly diversified consumer base, widely available and transparently traded. Choosing Methanol enables owners to hedge their bets on future fuels and gain short term experience on using it as bunkers with minimal adaption.

locations, the facilities and in some cases the carbon sources that could be used to create a sustainable supply of marine fuel. With the right policy signals and investment from public and private sources, they could become hubs for decarbonisation beyond conventional diesel fuel bunkering.

Alongside cargo handling and distribution ports will increasingly include production sites for renewable fuels using electricity produced from offshore wind and feedstock sources such as municipal solid waste to create clean fuel.

Such projects reflect and expand on the regional role that ports play in their local economies, providing employment into the logistics chain and in supporting the local workforce as well as related manufacturing and skills.

Fuel Cells

One of the issues facing shipowners is that the multi-fuel future for shipping is a phased process in terms of regulation, availability and suitability, with LNG and Methanol the only practical short-term choices. If the goal, as many believe, is to use Ammonia and Hydrogen as fuel, this has to be seen in the context of safe, affordable and regulated technology.

Hydrogen's application as a direct fuel could be many decades away. But faced with the problem of needing to cut emissions quickly ahead of 2023 and 2030, shipowners are examining and investing in hydrogen fuel cell technology, with Methanol as the primary energy carrier, where it is either reformed alongside the fuel cell in a separate unit, or integrated within the fuel cell itself.

Fuel cells can already meet the electrical demands of vessels in port and supply power for applications including refrigerated containers and port equipment. And a new generation of fuel cells can provide both vessel auxiliary and ultimately main propulsion power.

Compact and affordable processes are increasingly available for onboard reforming of Methanol to Hydrogen at qualities necessary to be used in fuel cells. In addition, using Methanol as the hydrogen source reduces cost towards a competitive price with diesel for some generator applications.



Fuel cells are already in use in a number of maritime applications, notably onboard Viking Lines' ropax ferry M/S Mariella. The vessel is equipped with a fuel cell stack powered by a methanol fuel supply system designed and installed by the Meyer Werft shipyard. Mariella's Methanol fuel tank is bunkered by truck using a standard hose arrangement and is reformed into Hydrogen and transformed into 90kW of electrical power.

Newbuilds and Retrofits

MAN Energy Solutions holds the leading newbuilding market share in Methanol dual fuel engines, with 21 firm orders representing 101 of its ME-LGIM engines. Vessel types are divided between containerships, bulk carriers, chemical and methanol carriers.

While LNG-fuelled engines make up the majority of alternative fuel engine contracting, the clear increase of interest in Methanol as a marine fuel is increasing. MAN ES expects a steady uptake to around 30% of all dual-fuel engines contracted in the next few years from now.

Recent developments in the OEM space suggest that the shipping industry is moving into an era when retrofits and conversions to alternative fuels become both possible and practical.

With the installed base of Methanol-dual fuel marine engines growing, the news that engine-maker Wartsila has released a Methanol-capable version of its Wartsila 32 four-stroke platform has

significant implications for shipowners and shipbuilders.


In addition, Wartsila has announced that it can retrofit electronically-controlled two-stroke engines to Methanol fuel in future. Minor modification makes possible a short conversion timeline and engines can be further adapted to use Ammonia in future.

As one of the two confirmed alternative fuel options available today Methanol can now be used in a broader range of newbuildings and vessel applications. In the longer term, the ability to convert conventionally-fuelled engines to Methanol provides an additional level of future proofing.

With the potential to build, as well as convert and retrofit to Methanol for both two and four-stroke engines, owners can make decisions with an increased degree of optionality and flexibility, knowing that conversion to Methanol will be a realistic option in future.

Operators in a cross-section of shipping segments say that compliance with IMO regulations – in particular the Carbon Intensity Indicator - underpins their decisions, with interest rising across the board according to MAN ES. The engine-maker expects to see a rapid rise in the number of dual-fuel engine conversions concluded in the near future, with enquiries for conversions particularly intense in consumer facing segments, such as containers and pure car and truck carriers.

Methanol has 3-5 critical years of head start of experience-building and applicability as an alternative fuel, enabling vessel operators to move forward with emissions reduction in a phased way at low cost to Opex and Capex.

With IMO's 40% CO₂ reduction target of 2030 fast approaching, shipping does not have the luxury of waiting for as yet unavailable fuel technologies to reach technical readiness, regulatory approval and availability. Cleaner Methanol is available now – for existing vessels as well as newbuilds – and as shipowners are demonstrating, the increasing trend towards low carbon and renewable formats will only further accelerate its adoption. 



L

THE NEXT GROWTH HORSE OF BANGLADESH ECONOMY

Light engineering industries are SMEs with high labour intensity and low capital investment.

This sector contributes value chain support to manufacturing sectors like textile, construction, paper, railway, agriculture, automobile, pharmaceutical, food processing and marine. Light engineering industry in Bangladesh has around 25 subsectors producing nearly 4000 types of small machinery, accessories and spare parts. There are around 50,000 small scale industries in Bangladesh manufacturing light engineering goods which amounts for a total investment of \$15 billion. In the past three decades it has emerged as an import substituting industry replacing 50% of imported engineering items. As part of the export diversification policy, exports of light engineering goods is incentivised with 15% cash return since 2018. Last year the sector contributed about 2.2% to the country's GDP. The annual turnover of the light engineering sector is \$1600 million, of which import substitute products are valued at a round \$200 million.

Light engineering goods have the potential to become the largest export sector in Bangladesh, provided skilled labour, technology, quality standards and branding issues are solved.

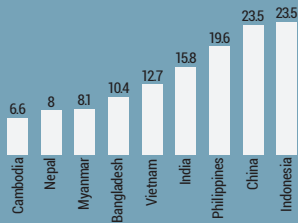
Global market size for light engineering industry exports is \$7 trillion and share of Bangladesh is not even 1%. Engineering goods account for about 1.5% of total merchandise exports out of Bangladesh.

In the year 2010-11, Bangladesh exported light engineering goods worth \$221 million, which has grown to \$795 million by the year 2021-22 and is about to touch the \$1 billion mark very soon. Majority of the exports go to Thailand, the Netherlands, Japan, India, South Korea, UK, Taiwan and Pakistan. To increase the share of light engineering exports in the total exports of Bangladesh, the government has chosen five districts for establishing industrial parks, which include Dhaka, Narayanganj, Jessore, Bogura, Narsingdi

and Ghazipur. Industrial city is under construction in Munshiganj on an area of 50 acres at a cost of Taka 316 Cr. About 90% of the factories established are into repair operations and the remaining 10% are into manufacturing.

A major chunk of the domestic demand for machinery is met by the light engineering industries located in Bagura, especially in the agriculture sector. The industries here have an annual turnover of TK600 Cr. Around 1000 factories have been established in the past four decades. A number of industries are exporting tube wells and centrifugal pumps to India, Nepal and Bhutan, which has encouraged others to tap the South Asian markets for agro machinery. Industries in Bagura meet 80 per cent of the domestic agri-machinery

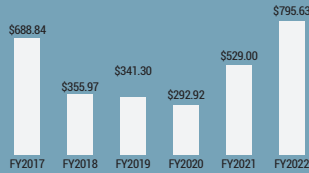
Key competitors of Bangladesh have comparatively better labor productivity



SOURCE: Asian Productivity Organization, 2020

LES saw a significant year-on-year growth of 50.4% to \$795.63, from \$529 million

Light Engineering sector of Bangladesh



DATA VISUALIZED BY BIZDATA INSIGHTS

SOURCE: EPE

demand, saving crucial foreign exchange for the country.

European and American markets provide duty-free access to Bangladesh. The light engineering products import in the UK is valued at \$327 billion and Bangladesh aims to grab a chunk of this market for its exports. The UK has come up with a preferential trading scheme for developing countries by relaxing local value addition requirement from 30% to 25%. Bangladesh currently exports \$56 million worth of light engineering goods to the UK, which is about 0.02% of the UK market. It is also the 3rd largest non-EU exporter of bicycles to the EU and the eighth largest exporter in the goods market. The rise in food delivery start-ups has led to the boom in domestic demand for bicycles. The top destinations for bicycle exports from Bangladesh include EU, UK, India, Australia and Taiwan. Bangladesh is also emerging as a major player in electronics. About 60% of the smartphones sold in Bangladesh are locally manufactured. Conducive tax policies are pushing the sector forward.

Why is light engineering products industry not posting impressive growth?

A major reason is the high VAT imposed on the industry, in addition to the high import duty. Up to 26% of import duty is levied on import of raw material. The sector lacks a dedicated industrial park for light engineering goods. The quality of light engineering goods produced is yet to be raised at par with global standards due to lack of modern technology and machinery. Due to

lack of quality certification, this sector is facing a branding problem in the international market. The local industry owners pay a VAT of 15%, but imported products are not required to pay VAT as they are not produced in Bangladesh. As a result, domestically produced light engineering products become more expensive than imported products.

Abdur Razzak, President, Bangladesh Engineering Industry Owners Association (BEIOA) says, "The SMEs and micro-industries are trying hard to improve their enterprises into a modern one and produce quality products for the shipments. The sector is struggling with fund-and skilled-manpower shortages to upgrade the country's light-engineering sector, resulting in a lower export growth as compared to a huge potential. Major problems of the sector are absence of international-standard certification, skilled manpower, infrastructure and branding. When these problems will be overcome, the country's engineering products will emerge as another forex-earner, reducing dependency on RMG."

Dr Khandker Golam Moazzem, Research Director, Centre for Policy Dialogue (CPD) said, Bangladesh should invite some international-standard enterprises like Korean Hyundai for investment aimed at transferring technical know-how, developing skilled manpower and building the country's image.

Anwar Hossain Chowdhury, Director-General, Bangladesh Industrial Technical Assistance Centre (BITAC) says, "We have a lack of high-skilled and international-standard trainers. We are

supplying lot of skilled manpower for the local light-engineering sectors. But we could not develop manpower up to the international standards due to the trainer shortage. We have recently set up Tools and Technology Institute at BITAC which is helping the local SMEs to standardize their products. Gradually they plan to turn the institute into an international-standard body for certification and developing high-skilled manpower."

Golam Azam Tikul, President, Bogura Forum for Agro-machinery Manufacturing said, "We are nowhere close to where we can be. The market is also taking a blow due to production of counterfeit products in unauthorised factories and import of substandard products from India and China.

Md Mofizur Rahman, Managing Director, SME Foundation said, "It is important to reduce the tax rate in the entire SME sector, including the light engineering sector. For example, the Japanese economy is 90% dependent on the SME while our SME sector accounts for some 20-25% although more than 75% employment is in this sector."

Government support

The government is providing a 10 year tax holiday for newly established industries engaged in manufacturing sector. Import duty is exempted on capital machinery imports and 50% tax exemption is offered on income derived from exports. Import duties have been reduced on brass wire, copper plate, tools and equipment. 15% cash incentive is offered on the export value of light engineering goods including accumulator battery. The Customs duty on raw materials of light engineering machineries is 35%, but it is 1% on imported light engineering spare parts and products.

The sector has the potential to grow four-fold of its current market size. Which means about 2 lakh factories can be added, \$60-70billion investment can be made, bringing employment to 40-50 lakh people and can increase its contribution to GDP by about 10%. Light engineering goods have the potential to become the largest export sector in Bangladesh. 



H

INDIA'S PREFERRED GATEWAY TO THE EUROPEAN MARKET

HAROPA PORT has become the most preferred gateway for Indian exporters into the European market. Last year, against the backdrop of an international scenario marked by numerous crises, total traffic through HAROPA PORT expanded despite a European market in downturn. Specifically where container traffic is concerned, HAROPA PORT has demonstrated striking resilience by winning market share in the Northern Range and improving its modal share on the Seine Axis.

The 1st port of France occupies the 5th position in the northern range in terms of TEUs and is placed 4th in terms of tonnage. It also occupies the first position in terms of container traffic handled and movement for France foreign trade. HAROPA PORT is the first port of call for imports entering into the European market and the last port of call for the exports going out. It connects to the first biggest consumer market in

HAROPA PORT is the most time and cost efficient port for Indian trade connecting into the European market. Maritime commerce (containerised) with India has also continued to expand, by around 10-12 % each year on average.

France, which is also the second biggest consumer market in Europe.

Last year, HAROPA PORT recorded 85.1MT of maritime traffic, of which 3.1M teus was containerised and 14.2MT was dry bulk. About 21MT of cargo moved through waterways, signifying the importance of waterways in connecting into the hinterland. The year saw €555million investment, of which €251M was public funded and €304 was private funded. In the coming two years, HAROPA PORT aims to achieve a 20%

increase in logistics space and 35MT of river traffic by 2025.

Specialities of each of the member ports

The Port of Le Havre is the gateway to Europe and also welcomes world's largest container vessels. The port of Rouen stands at the forefront among Western European ports in terms of handling grain and breakbulk cargo. The port of Paris spearheads in last mile logistics.

Logistics & industrial corridor

The Seine Axis is a key logistical area with 12 million m² of warehousing facilities About 1.8 million m² of warehouses connected to the river and the tri-modal infrastructure. 2 M sqm of operational logistics warehouses are available and 1.2 M sqm of warehousing surface area is being planned. A wide range of surface areas from bare building land to turnkey warehouses and offices - From 5,000 to 175,000 sqm with short, medium and long-term availability are present. Warehouse area near the port premises will be increased from 1,545,000 sqm in 2019 to 1,870,000 sqm in 2025.

#1 in reefer cargo

HAROPA PORT also occupies the top position in France for movement of reefer cargo. In 2015, about 1,93,600 TEUs of reefer cargo moved through the port, which increased to 2,46,200 TEUs in 2021, marking a growth of 27%. Majority of the reefer trade (30.4%) is with Asia, of which, China accounts for 11%. HAROPA has about 50 specialised freight forwarders in handling reefer cargo, over 1M m3 of storage capacity and 19 ha of land reserves. The port has dedicated reefer equipment (3000 reefer plugs) with a specialised reefer protocol for 24X7 monitoring of reefer containers for humidity and temperature reading.

Leading in agri business

With 50 years of experience, Rouen is the number one port in France for handling agri products. World class companies such as Cargill, Soufflet, Saipol, Saint Louis Sucre and Borealis are located near the port of Rouen. It is the main hub in northern France for fertilisers and biofuel. FOB Rouen

price is the most competitive in France and wheat is available all year long. Complete end-to-end processing of grains - drying, sorting, cleaning, surveying, etc... port operators offer comprehensive level of service in order to ensure the best quality for grain importers.

Grain export: HAROPA PORT has 1.3 million tonnes of storage capacity for grains, with a loading rate of 100,000 tonnes per day. An average of 7.3 MT of grain is exported each year. 4 silos operators are present in Rouen offering 0.9MT of storage capacity for grains and 0.4MT for other agri-bulk products.

HAROPA PORT offers huge land-base for infrastructure development

For the past several years Europe's Northern Range ports have been experiencing a high level of pressure on real estate supply: plots available for new logistics and industrial facilities in port ecosystems are increasingly scarce, and applicable legislation increasingly strict. HAROPA PORT is one of the very few managers of property assets in a position to offer real estate to private companies. HAROPA PORT will be placing on the market this year an average of one hundred hectares for industrial and logistics use. Such opportunities are all the more valuable for the fact that the regions concerned serve France's largest consumer catchment area.

Technology

It is the first French port to switch to 5G, making changes in the Port Community System aimed at harmonising the digital tools for port call management along the Seine Axis and preparing for the port one-stop-shop S-WiNG, and S)ONE 100% digital & paperless procedures

and solutions. S-WiNG is a port of call management tool that enables interaction among harbour master's office, shipping companies, waterway carriers and shipping services. S)ONE is a goods flow management tool, a new generation collaborative platform that enables players in the logistics chain to facilitate all foreign trade exchanges at national level.

AI is placed at the service of port call predictions to reduce greenhouse gas emissions, among others.

Environmental strategy

Multi energy stations: A new generation of multi energy stations will be erected in multimodal platforms around Paris. They will help in distribution of decarbonised hydrogen to meet the needs of road transport and river transport.

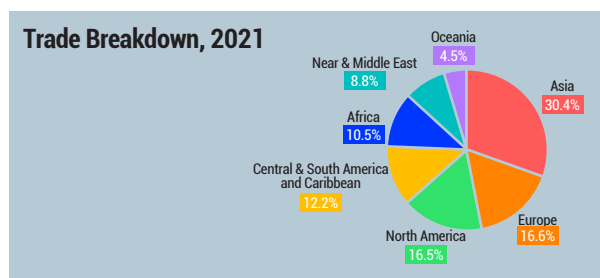
Biowaste methanisation project: To be started in 2025, the project will generate biogas for injection into the Paris area supply network. Paprec France SA foresees to set up a plant in Gennevilliers with a production capacity of 50,000 tonnes per year.

Environmental Shipping Index: HAROPA Ports grants an allowance to sea going ships that perform better in reducing air emissions than required by the current emission standards of IMO.

Plastic valley: A new industrial cluster dedicated to recycling and production of latest generation renewable plastics.

Shore power: Electric shore power will be provided to sea going vessels. In association with VNF (French Waterways Association) 13 electric terminals have already been implanted and 89 more terminals will be erected by 2025.

Electrification of terminals: Electrification of cruise terminal in Le



SILO Operator	Storage capacity	Loading rate	Annual loading
BZ Group	70,000 tonnes	800t/h	0.5MT loaded/year
Senalia	620,000 tonnes	Site 1=3000t/h Site 2=2400t/h Site 3=1000t/h	4 to 6MT loaded/year
Simarex	166000 tonnes	800t/h	0.8 to 1 MT loaded/year
Socomac	160,000 tonnes	1500t/h	1.6 to 2 MT loaded/year



"We are preparing for a change of scale, moving from a territorial vision to a corridor vision. Massive investments, creation of an industrial ecosystem, development of mass transport, energy transition are the key drivers to this vision."

- Stéphane Raison
CEO, HAROPA



"Our ambition is to create a virtuous ecosystem on the scale of the Seine axis. Thus, we are working on CO₂ capture with manufacturers such as Air Liquide, Borealis, Exxon, TotalEnergies and Yara with the aim of recovering, by 2040, 7 of the 9 million tonnes of industrial CO₂ produced."

- Cedric Virciglio
Director- Strategic Development, HAROPA

Havre is in progress. The target is to have three electrically connected berths between 2024 and 2026. Electrification of container terminals is planned with on shore power supply from 2028.

ZIBAC project: Low carbon industrial zone

In 2022, French Environment and Energy Management Agency (ADEME) launched a call for proposals for the creation of the ZIBAC project (Zones Industrielles Bas Carbone/Low-Carbon Industrial Zone) on the Seine Axis.

HAROPA PORT with its three port/ industrial zones, working through the nonprofits Synerzip – LH, Incase – Industrie Caux Seine and Upside Boucles de Rouen, submitted a joint application to the call.

In October 2022, the cities of Le Havre, Rouen, Paris, in conjunction with HAROPA PORT, selected 21 submissions in response to the first call for declarations of interest for the development of decarbonized urban river logistics at 32 locations along the Seine Axis.

The project partners established a provisional list of studies costing over €10m for the preparation of the decarbonization of industrial and logistics operations.

The projects include a biowaste production initiative, hydrogen generation from LNG service stations, plastic recycling, among others.

Specifically, the largest multimodal platform of the Greater Paris area will soon be producing green energy using biowaste. A company named PAPREC has been selected to design and operate the future methanisation plant to process household biowaste from the Paris area at the port of Gennevilliers. This plant

has a capacity of 50,000 tonnes and, starting in 2025, will generate biogas for injection into the Paris area supply network, in addition to farm fertilizer.

Following the deployment of a network of LNG service stations, a new generation of multienergy stations will be set up at multimodal platforms in the Paris area at Gennevilliers, Bonneuil-sur-Marne, Limay, Bruyères and Montereau. These facilities will be able to distribute decarbonized hydrogen to meet the needs of road transport, as well as river transport in a later phase.

Indo French connection

Last month, HAROPA Port conducted a tour of India, strengthening the already close ties between the countries. Maritime commerce (containerised) with India has also continued to expand, by around 10-12 % each year on average.

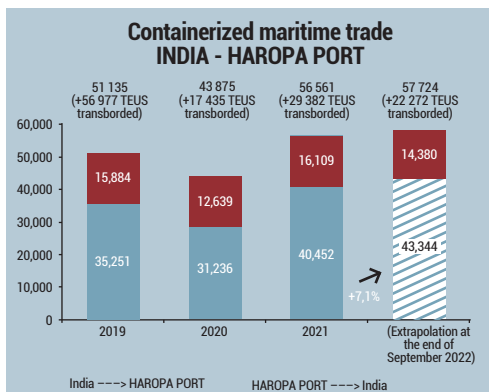
India – HAROPA bilateral trade stood at 51,135 TEUs in 2019, which increased to 56,561 TEUs in 2021. As on September 2022 the bilateral trade stood at 57,724 TEUs.

HAROPA connects to 16 ports in India: Mumbai, Chennai, Kolkata/Haldia, Cochin, Visakhapatnam, Tuticorin, Kandla (Deendayal Port), Pipavav Port, Mundra, JNPA, Hazira, Mangalore, Krishnapatnam, Kattupalli, Bangalore, Ennore-Kamarajar.

Compared to Antwerp and Rotterdam ports, HAROPA has the most competitive connectivity to Indian ports. The below table shows the number of days taken for connecting to Indian ports:

- HAROPA has 11 commercial offers with JNPA and 13 with Mundra
- HAROPA has 3 direct services: 1 operated by CMA CGM+COSCO+OOCL, One each operated by MSC and ZIM

HAROPA PORT's unique capability to carry goods from around the whole world into the heart of the biggest French consumer catchment area makes it a partner of especial interest for Indian actors looking to build a more virtuous logistics chain. Further, France and India also share a common determination to accelerate the ecological transition towards cleaner fuels and greener ports. These mutual interests are bound to further boost the Indo-French partnership.



PORTS	JNPA	MUNDRA
HAROPA	21	21
ANTWERP	23	24
ROTTERDAM	28	29

HAROPA BECKONING INVESTORS

"We have more than 12 million square meters of warehouses and we manage 16,000 hectares from Le Harve to Paris. We have more than 70 platforms at Paris Port. Indian companies interested in setting up new plants for electric vehicles, batteries, and to do more business in France are welcome," announces **Stephane Raison, CEO, HAROPA**

H

AROPA PORT is a two-year-old port, whose name is a contraction of three port cities including Le Havre, Rouen, and Paris located at a distance of 200km. Le Havre, the youngest port city among the three was created in 1517 (the beginning of the 16th century), by King Francis to enable the port to participate to conquer North America.

What we created was not only a merger of seaports, it's a green corridor between the sea at Le Harve and Paris.

This corridor offers multiple investment opportunities because it has something unique in France and Europe, as far as the integration of port and business is concerned. We are expecting more public/private, foreign and French investments. HAROPA PORT is obviously the best place to invest if you want to serve the European market in the coming years.

The trade between continents and countries is going to change. Europe is now focusing on in-house manufacture of essential goods. Covid was not the worst, but indeed it's a

wake-up call for us, as we understood that pharmaceutical goods or other kinds of goods were no longer produced in sufficient quantities in Europe. So, there is a need for producing and manufacturing in Europe. There is a need to understand that within a few years there will be regulations against CO₂ emissions coming from abroad. The European Commission (EC) is going to implement very strict regulations on European nations as far as CO₂ emissions are concerned.

Q. What investment opportunities does HAROPA offer?

We have a corridor now. We do not see the ports as only a little space near the coast, but we see the ports as corridors where we can move train, barges and motorways to deliver to the country. Let me tell you how we are transforming the port.

If you have companies in India interested in setting up new plants for electric vehicles, batteries, pharmaceuticals and to do more

business in France, we have space to welcome new investment projects in the field of logistic and industry. We want to transform all the logistics in France.

We are the first port in France for container business, we are the first port for export and we export a lot of grain. Last year we shipped more than 80,000 tones to India for beverages. Now we are also the French reefer port to export meat and fruits. More than 3 million TEUs container business was done at Le Havre port last year. Last year with MSC, we decided to invest €1 billion to develop their container terminal..

Q. How is the business growing between India and France?

The business is not so high, we did less than 50,000 TEUs last year. So, it's a little business for the moment. But there is huge potential for growth in terms of reefer business, agro-business which could strengthen the bilateral trade between the two countries. We offer a huge market- imagine 1/3rd GDP of France is based around Paris. We have more than 100 trains per week to deliver into the whole of France, Italy and some parts of Germany.

The Indo-France containerised trade has been growing continuously at around 10% over the last six years. If you are talking about Indo-France total merchandised trade it has been showing same 10% growth and it has doubled over the last eight years. T. We have been growing at 3-5 percent and with the recent investment of MSC in new TiL terminals and by CMA CGM, we are expecting to grow from 3 million TEUs to 7 million TEUs by 2030. The new terminals by MSC will have a draft of 17m and can accommodate large vessels of 24,000 TEUs.

Q. In the land bank that you have mentioned what type of companies are you looking at for setting up business?

All the companies which want to develop new businesses are welcome, as I have told you earlier, we are expecting batteries, and new electric vehicle companies, automotives, pharma, agro-business and a whole lot of other industries.



Q. How is the response so far from the India companies?

The response has been very great. We have an unparalleled 200km of waterways available which has attracted investment from many industries as today there is no spare land available in our neighbouring ports. Recently IKEA has put up a huge warehousing facility at the outskirts of Paris. We are looking at sustainable industries as we are talking about fully green corridors.

Q. Apart from offering real estate any other incentives provided?

For the last three years France has been the most attractive country in Europe. They catch all matter of investments of foreign countries.

Q. How is India when you compare with China?

Now with changed international context and with China Plus One policy India has

the advantage of improving the trade.

Q. What are the green initiatives at the port for decarbonisation?

We work a lot on new energies like Hydrogen, e-Methanol, Bio LNG, and e-Ammonia. So, in a few weeks we will announce big plans to develop new infrastructure to be sure. We will be able to deliver Bio LNG for maritime vessels for the time being.

Q. When will you be able to bunker new fuels?

Yes, we will be able to offer new fuels by 2027. We have target of 2028 for Netzero, and by 2030 in the full zone of Paris no trucks will be allowed, only barges will be used during the Olympics. It is the smart corridor and now it is the green corridor. We want to ensure zero emission for all vessels and the terminals, inland waterways, and for the cruise vessels.

Q. What are the top three traded commodities to India?

It includes a whole range of commodities including chemicals, pharma, leather goods, textiles and cosmetics. Chemicals is the major commodity, but there are other full spectrum of goods like rubber, plastic and automobiles. In Europe there are three major consumption centres including Paris, UK, and Germany. Paris consumes about 1/3rd of European region.

Q. Which are the other countries competing to invest in HAROPA, other than India?

Companies from USA, and other European countries like Belgium and Germany are looking for the space. Sea food exporters associations and meat exporters associations have shown serious interest, as we have close to some 6,000 plugs available here.

HEADING TOWARDS THE 10 MILLION TEU CLUB

The addition of fourth container terminal with a capacity of 4.8 million teus will facilitate JNPA to be the part of the 10 million TEU club, with other capacity addition projects like coastal berth, says **Sanjay Sethi, IAS, Chairman, JNPA.**

Congratulations for crossing the 6 million TEUs milestone. The current global export/import scenario is dull and you also have private ports on the west coast competing for cargo. So, how has JNPA been able to attract more traffic?

JNPA's strategic investments in infrastructure, technology, and efficient operations, coupled with its collaborative approach with stakeholders, have helped the port attract more traffic despite Russia-Ukraine war and the challenging global export/import scenario and competition from private ports.

We have taken various measures such as investing in development of infrastructure to meet the demands of the shipping industry. This includes the commissioning of Fourth container terminal, dredging of the approach channel, and the implementation of state-of-the-art technology along with the road connectivity project.

We have also implemented efficient operational processes, which helped reduce the turnaround time for ships and increased the speed of cargo handling. Similarly, digitalisation

has helped reduce the time and cost involved in processing cargo.

JNPA offers competitive pricing to shipping lines, which has attracted more traffic to the Port while the Port has collaborated with various stakeholders, including shipping lines, logistics providers, and government agencies, to develop a comprehensive ecosystem for the shipping industry.

While the traffic grows there will be more trucks visiting the port, how do you plan to accommodate this rise in traffic?

Accommodating the rise in traffic due to an increase in trucks visiting the Port would require a multi-pronged approach that considers various factors such as the available road infrastructure, traffic management systems, and environmental concerns.

Some potential strategies that could be employed include improving road infrastructure, widening of existing roads, building new access roads, or upgrading highways to accommodate more traffic. This would require working closely with local and state authorities to identify and prioritize road projects that would have the most significant

impact on reducing traffic congestion. JNPA has widened 43.9 km of its approach roads viz. NH-348 and NH-348A to 6/8 lanes. Further, various projects are undertaken by the GoI under the Bharatmala project. Also almost the entire roads leading to port are now concretised and have smooth riding quality.

Port has developed a Centralised Parking Plaza (CPP) in 45 hectares for parking of self-sealed factory stuffed container trucks with custom processing zone and facilities like Canteen, Driver's Dormitory, weighbridge, open examination of containers, buffer yard, refer plugging facilities & Medical facilities etc. resulted in to zero congestion and reduction in overall logistic cost to the trade.

The other point is implementing traffic management systems that include the use of real-time data to monitor traffic flow and adjust traffic signals and lane configurations to optimize traffic flow. Additionally, implementing a truck reservation system could help manage the flow of trucks entering and leaving the port, reducing the number of trucks on the roads at any given time.



Encouraging modal shift could help reduce the number of trucks on the road. Additionally, promoting the use of electric or low-emission trucks could help reduce the environmental impact of increased truck traffic.

The rise in traffic could be managed by executing a comprehensive and coordinated effort from various stakeholders, including government agencies, port authorities, trucking

companies, and technology providers.

You are also in the process of developing another deep draft port in Vadhavan. What is the update on the port's development? Will Vadhavan Port impact the movement of traffic to JNPA terminals?

The mega ports are likely to enhance India's cargo handling capacity by 300

million tonnes per year by 2040. As part of the Sagarmala vision, India's cargo traffic handling capacity will be enhanced from 1,550 million tonnes per year to 3,000 million tonnes per year by 2025. These ports will also boost coastal shipping, thus decreasing the dependence on transportation through railways and roadways. It is also likely to cut down the inland transportation costs by up to 80 percent.

JNPA's one of the most ambitious projects, Vadhvan Port is now very much on track. All studies that need to be done for environmental clearance have been completed and the detailed engineering studies are almost complete. The next step is to go for investment approval, where all the financial and engineering plans, changes in proposed cost/contours etc. are to be approved by both, the Finance Ministry and the Cabinet. This should happen in the next few months.

The Ministry of Railways (DFCCIL) and Ministry of Road Transport & Highways (NHAI) are working on the connectivity. As soon as the final environmental clearance is received, the port will be ready to go ahead for investment decision by the GoI.

By December 2023, DFCCIL plans to complete 95% of the dedicated freight corridors. How are the DFCs connected to JNPA and how will they transform the movement of traffic?

Dedicated Freight Corridor Corporation of India Limited (DFCCIL) is developing two dedicated freight corridors (DFCs) in India, one on the Western route and the other on the Eastern route. The Western DFC runs from Dadri near Delhi to JNPA, while the Eastern DFC runs from Ludhiana in Punjab to Dankuni near Kolkata.

The Western DFC connects to JNPA through a 41-km rail link between Vasai Road and JN Port, which is being developed as part of the project. This rail link will provide a direct and dedicated freight route from the northern hinterland to JNPA, one of the largest ports in India.

The DFCs will transform the movement of traffic by providing a dedicated freight corridor that will

ensure faster, safer, and more efficient transportation of goods. The DFCs will reduce transit time and transportation costs, as well as increase the carrying capacity of the railway network. With the completion of the DFCs, it is expected that there will be a significant shift in freight transport from road to rail, which will lead to a reduction in congestion and pollution on highways.

Overall, the DFCs are expected to transform the logistics and supply chain industry in India, and help in achieving the goal of increasing the share of railways in the freight transport sector.

Indian government will soon roll out a green port policy to encourage local ports to adopt emerging global standards on carbon neutrality. Tell us about the initiatives at JNPA to make its operations carbon neutral?

The Jawaharlal Nehru Port Authority (JNPA) has been taking several initiatives to make its operations more sustainable and reduce its carbon footprint.

We have installed 4.1 MW solar power plant and 6.75 MW is in progress. JNPA is providing shore power supply to tugs and port crafts and planning to provide the same to EXIM vessels by 2030. JNPA has 31 nos. of E-RTGCs which save a carbon footprint of about 2500 Tons per year. Also, PPP Operators are planning to convert existing diesel engine operated RTGCs to electric / hybrid RTGCs. Port has acquired 12 nos. of electric vehicles in place of diesel vehicles for intra-port transportation. Port is also planning to acquire electric buses for commutation of employees.

When it comes to energy efficiency, we have implemented several measures such as LED lights, BLDC Fans, energy efficient HVAC system and Smart lighting to reduce carbon footprint.

We have a waste management system that segregates waste and recycles it to reduce the amount of waste sent to landfills. We have also installed a sewage treatment plant to treat the waste water generated within the port premises.

Development of green belt within port premises serves as a habitat for birds and other wildlife.

The Port's efforts towards carbon neutrality have been recognized globally, and it has received several awards for its sustainability initiatives. With the upcoming green port policy by the Indian government, it is expected that more ports in India will adopt similar measures to reduce their carbon footprint and contribute towards a greener future.

Compared to neighbouring foreign ports, the vessel related charges at Indian ports are said to be high. Why is it so? How can Indian ports be made cost competitive?

Several steps can be taken to make Indian ports cost-competitive. There needs to be significant investment in port infrastructure to make it more efficient and cost-effective. This can include upgrading existing infrastructure, building new facilities, and improving connectivity with the hinterland. The regulatory framework needs to be streamlined to reduce compliance costs for port operators. This can include simplifying licensing requirements, harmonizing environmental regulations across ports, and modernizing labour laws.

We also need to have focus on improving operations to reduce turnaround time and cargo handling cost. This can include investing in new technology and equipment, improving workforce skills, and enhancing coordination between port stakeholders.


Similarly, to attract more business to Indian ports, incentives can be offered to users. This can include tax incentives, reduced tariffs, and streamlined customs clearance procedures. By taking these steps, Indian ports can become more competitive and attract more business, which will ultimately benefit the Indian economy as a whole.

In alignment with the global trends, Indian major port authorities have repositioned themselves since the late 90s as landlords leaving service delivery in cargo handling to the private terminal operators under Public Private Partnership (PPP) model. PPP has ushered in cutting edge technology and global best industry practices meeting global benchmarks in productivity.

However, the vessel related services which include the pilotage and towage are being handled by the ports only. These services are provided by ports either by using port owned equipment or by hired equipment. Both these options are cost intensive. Also, unlike other countries where the dredging is carried out by the government, the ports carry out dredging which adds to the cost. Under the Maritime India Vision 2030, it is proposed to engage the private players in vessel handling, especially in the provision of pilotage and towage services with the aim to rationalize expenditure within ports and also to enhance export competitiveness of Indian trade by reducing percentage share of logistic costs in total cost and enhance ease and speed of doing business in India besides keeping competitive the cost of doing business.

After recording the 6 million TEUs milestone, what will be your next target?

JNPA's primary objective while undertaking any project is to enhance its trade capacity and improve port efficiency. In FY 2022-23, the JN Port handled 6.05 Million TEUs against 5.68 Million TEUs in 2021-22. This performance is the highest at Jawaharlal Nehru Port for any financial year. However, JNPA further strives to achieve the benchmark of handling 10 million TEUs by not only enhancing infrastructure and increasing trade efficiency, but also by working on various aspects like providing better connectivity, reducing logistics costs, decreasing turnaround time, and digitising the process.

Regarding infrastructure capacity addition, JNPA is developing the Fourth Container Terminal, of which phase I is already operational and phase II work has begun and is expected to be completed by April, 2025. The total capacity of the Fourth Container Terminal to handle cargo is 4.8 million TEUs (2.4 million TEUs per Phase). The completion of this project will facilitate JNPA to be the part of the 10 million TEU club, with other capacity addition projects like coastal berth and additional liquid cargo jetty. 



MAERSK: CROSSING A NEW FRONTIER IN THE EXPORT OF TEMPERATURE SENSITIVE CARGO

A

fter two years of the lockdown, mango farmers in Maharashtra had much to rejoice, as their produce successfully reached US shores this summer. The consignment that had the involvement of government bodies such as the Maharashtra State Agricultural Marketing Board (MSAMB), Agricultural and Processed Food Products Export Development Authority (APEDA) and Bhabha Atomic Research Centre (BARC) marked the first successful shipment of mangoes to the US via sea. A highly perishable commodity, mangoes from India have sporadically found their way to the US only via air. This shipment – where 16,560 kg of mangoes left the Jawaharlal Nehru Port Trust (JNPT) and safely made the 27-day journey to reach Newark port in excellent condition – was not only historic but a much-needed inflection point in the export of fresh fruits and vegetables from India.

Technology that enables fruits and vegetables to remain fresh after a 20+ day journey at sea, may just be the necessary fillip our farmers need to access newer, more distant markets.



BY VIKASH AGARWAL
MD, MAERSK SOUTH ASIA

Addressing gaps to realize the true potential of India's agri exports.

As one of the world's largest producers of agricultural and food products, India occupies a leading position in global trade of marine products, basmati rice, buffalo meat, spices, non-basmati rice, cotton raw, oil meals, sugar, castor oil and tea. Yet, its total agri-export basket accounts for a little over 2.5 per cent of world agri-trade. This points to a glaring gap in realizing the true export potential of India's agrarian economy. After all, did you know that India ranks second in the production of fresh fruits and vegetables, after China. And amongst fruits, the country ranks first in the production of bananas (26.29%), papayas (43.26%) and mangoes (45.14%).

A study mandated by APEDA some years ago revealed many challenges in the country's agri exports and supply

chain, especially in the case of fresh fruits and vegetables. This included an inefficient and unorganized backward integration model with our farmers that resulted in quality and longevity issues of the produce, not to mention the stricter norms enforced by importing nations with respect to production standards/traceability to farm etc.

On the logistics front, research body, CRISIL has pointed out to challenges across the value chain – from farm to port to final shipment. While shortage of reefer vans and unavailability of reefer plugs at the port are issues at the primary level, even at sea, maintenance

of the optimal temperature and quality deterioration are huge obstacles. It is in this background that the recent effort of MSAMB in transporting mangoes via sea needs to be recognized.

Innovation that opens a new world of opportunity

The full load of nearly 17 metric tons was divided into 5-6 lots, factoring in the MSAMB facility's capacity to irradiate the fruit. Irradiation is a common technology that uses ionizing radiation to sterilize fresh produce or food. By reducing or eliminating microorganisms and insects, one can improve the safety and extend the shelf life of foods. The mango fruit was harvested accordingly, arriving at MSAMB at 8-12-hour interval gaps. On arrival, the fruit was put through a 52° celsius sodium hypochloride solution treatment for three minutes – a special chemical solution developed by BARC, and then irradiated. It was then precooled at 8° celsius and stored in cold storage. Finally, the mangoes were loaded in a StarCool CA container set at 10° Celsius, 4% oxygen and 6% CO₂ with two ethylene filters and three probes to monitor the cargo. Thanks to Maersk's specialized reefer visibility digital assistant, Captain Peter, the exporter was kept abreast of the condition of the cargo throughout the journey. The final proof was the perfect condition of the mangoes after almost a month at sea – the longest transit time ever successfully achieved for mangoes from India via the sea route. Shipments of mangoes from India by sea have gone as far as the UK, Netherlands, even New Zealand but never the US. Opting for sea versus air is more economical because air cargo rates are ten times higher than sea. But the longer journey via sea has deterred many an exporter in the past, especially in the case of perishable commodities such as mangoes. With the re-opening of air travel after almost two years, air freight rates had reached an unimaginable high, with the charge from Mumbai to US jumping from INR 220/kg to INR 550/kg. The high cost of transportation coupled with the unavailability of cargo space in aircraft set the background to this summer's successful US consignment by sea. It

also unequivocally put the spotlight on how reefer exports can be fully leveraged to improve the fortunes of our farmers in the country.

Growing from strength to strength

Indeed, our farmers should be the focal point as we look to increase India's share in global agri trade. Considerable work is underway in this area via farmer connect portals and even clusters spouting up across the country. As a result of the sustained efforts of the Department of Commerce and bodies such as APEDA, activation of clusters such as the Varanasi cluster for fresh vegetables, Nagpur cluster for oranges and Krishna and Chitoor clusters in Andhra Pradesh for mangoes, have solved transportation/ logistics issues of these land-locked production areas. Exports took place from many clusters like these for the first time, with produce finding their way from farms to supermarkets in the Middle East and even South Korea. This was a major contributing factor to India's unprecedented growth in exports in 2020-21. 4 When it comes to exports of perishable commodities, upgrade of the current cold storage facilities in the country is the need of the hour.

Indian mango shippers are hoping to grow volumes into high-value markets, especially the US, after opening additional food-irradiation facilities to meet the quality criteria of some

countries. While the bulk of Indian mangoes traditionally go to markets in Europe and the Gulf, exporters and traders have recently extended their reach into some untapped destinations, notably Japan.

According to CRISIL Research, the Indian cold storage chain market can log a compound annual growth rate of 13-15 per cent over fiscals 2019-2023, mainly driven by rising demand for processed food, fresh fruits & vegetables, seafood and biopharmaceuticals in export markets. This coupled with technology that enables fruits and vegetables to remain fresh after a 20+ day journey at sea, may just be the necessary fillip our farmers need to access newer, more distant markets. 📍

Statement about ownership and other particulars about *Maritime Gateway* required to be published under Rule 8 of the Registration of Newspapers (Central) Rule 1956.

Form IV (See Rule 8)

Place of publication: Hyderabad

Periodicity of publication: Monthly

Printer's Name: R. Ramprasad

Whether Citizen of India?: Yes

Address: 4th Floor, Divine Banjara, Road No.12,Banjara Hills, Hyderabad-500 034, Telangana, India

Publisher's Name: R. Ramprasad

Whether Citizen of India?: Yes

Address: 4th Floor, Divine Banjara, Road No.12,Banjara Hills, Hyderabad-500 034, Telangana, India

Editor's Name: R. Ramprasad

Whether Citizen of India?: Yes

Address: 4th Floor, Divine Banjara, Road No.12,Banjara Hills, Hyderabad-500 034, Telangana, India

Names and addresses of individuals who own the magazine and partners or shareholders holding more than one per cent of the total capital:

Chinta Sasidhar

Plot No 550A/1, Road No. 92, Jubilee Hills, Phase – III, Hyderabad - 500 034

R Ramprasad

Flat No.102, DK Infra, Plot No 193, Doyens Township, Prof CP Rao Road, Serilingampally, Near Hyderabad University, Lingampally, K.V.Rangareddy, Telangana - 500 019

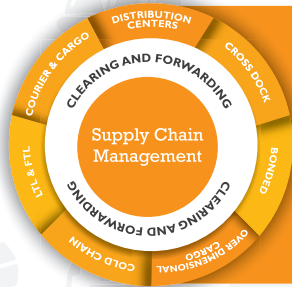
I, **R. Ramprasad** hereby declare that the particulars given above are true to the best of my knowledge and belief.

Date: 28 April 2023

(Sd/-)
R. Ramprasad
Publisher

TCI Supply Chain Solutions

...leading in Concept to Execution of Supply Chain
as a 3PL / 4PL



The core values offered by TCI Supply Chain Solutions are Network Design for production, aftermarket or demand fulfillment. We bring to the table **physical & digital expertise** to integrate your suppliers/customers into a **seamless network** enhancing your productivity & control over your supply/demand chain.

Key Industry Verticals:

EXCELERATE YOUR
AUTO SUPPLY CHAIN



SIMPLIFY YOUR
OMNI CHANNEL RETAIL



INNOVATE YOUR
HI-TECH SUPPLY CHAIN



SECURE YOUR
CHEMICAL SUPPLY CHAIN



IMMUNIZE YOUR
PHARMA SUPPLY CHAIN



PERPETUATE
YOUR BUSINESS



Services:



Supply Chain Consultancy



Production Logistics



Finished Goods Logistics



Warehouse Management (DC/FC)



Multimodal Logistics



Value Added Services

About TCI : • Moving 2.5 of India's GDP by Value of Cargo • 12 Million sq. ft. of warehousing space • 1400 Branch offices • Over 12000 Trucks in Operations • 6000+ Strong and Dedicated Workforce • Fleet of 7 Cargo Ships • CHA License • ISO Certified • Public Listed



A division of Transport Corporation of India Ltd.

TCI House, 69 Institutional Area, Sector - 32, Gurugram - 122 001, Haryana, India.

Tel: +91-124-2381603 | Fax: +91-124-2384085, Email: tciscs@tciscs.com | Website: www.tciscs.com

Find Us on





NLDS
NICDC LOGISTICS DATA SERVICES LTD
Logistics Redefined



ULIP

UNIFIED LOGISTICS INTERFACE PLATFORM

**INDIA'S DIGITAL GATEWAY FOR
ENABLING INDUSTRY PLAYERS TO
ACCESS LOGISTICS RELATED DATA SETS**

33 systems | 1600+ Fields | 106 APIs

ON A GROWTH PATH

- **490+** Registrations
- **76** NDAs
- **294** Verified Use cases
- **7 Cr+** API Hits

BENEFITS OF ULIP

- Authentication
- Process Optimization
- Track & Trace
- Document Digitization
- Automation
- Discovery Services



1800 309 8909

helpdesk@goulip.in

in | @nlds