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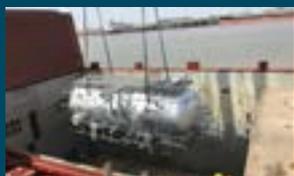
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J M BAXI

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From the Quarter Deck

Dear Friends and Colleagues, Greetings from the Quarter Deck! I hope all of you and your families have spent the long festive season joyously and safely. The season started with the Ganesh Festival and continued with Eid, Navaratri, Dussehra, Diwali and Christmas, so a belated Happy Festival Season and wishing you all a Happy New Year 2022.

As mentioned in my earlier messages, the safety and health of each one of you and your family members is paramount. We in India have done well, having delivered over 140 crore or 1.4 billion anti-Covid vaccinations. The pace of vaccination continues rapidly with the enhanced production of vaccine doses. However, we must be aware and alert since Covid has not been eradicated. We should not drop our guard but continue with our precautions for the foreseeable future, especially as Omicron variant is spreading rapidly across the world. The festival season did help in creating demand and consumption and this could and should continue.

The Indian economy is back on a high growth curve, and we are witnessing record GST receipts month after month. The Indian stock markets have seen a huge spurt in trading volumes, and the indices (BSE SENSEX and NSE NIFTY)

India, and the Tata Group are going to be the new owners. This success should accelerate the pace of disinvestment of other state-owned companies like BPCL, CONCOR, SCI, Pawan Hans and others.

The government has also announced a National Monetization Pipeline (NMP), which will monetize the infrastructure assets of the government through divestments to the private sector. There are plans to attract investments to the tune of Rs 6 lakh crores (about US\$ 85 billion) over the next four years. This is one the biggest investment opportunities for the private sector and is going to give a boost to all infrastructure industries. Logistics is going to be a major beneficiary, as there are plans for investment in ports, roads, pipelines, warehousing, etc. Therefore, there are exciting times ahead for our businesses.

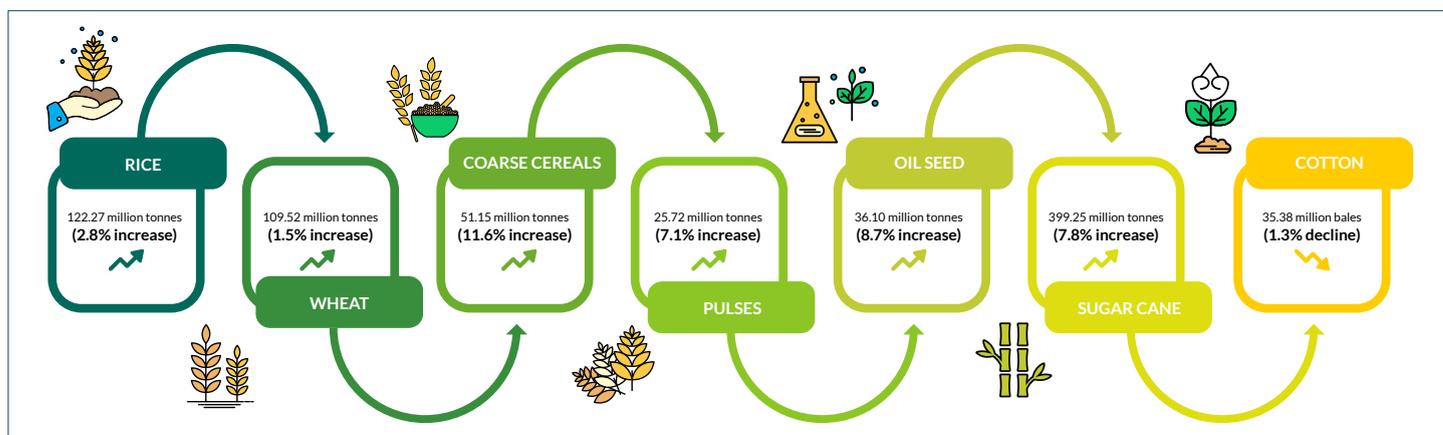
Agriculture is a major contributor to India's GDP, with a share of 20% (compared to a world average of 6.5%). Farming in India is highly dependent on the rains, and we have been fortunate in having had good monsoons in the past few years. Agricultural production across all foodgrain categories in India has, thus, been rising. Here is the increase in the annual production of major commodities in FY21:



season. This growth should provide a stable positive impetus from the rural areas also, which is good news overall.

Increasing spending and rising sales volumes, though, can lead to inflation, and we are already witnessing signs of rising prices in the retail sector. Retail prices for petrol and diesel are continuing to rise unabated. If not controlled, this inflation could become a big headache for the economy. The government has taken a few steps to combat inflation, including reducing the duty on petrol and diesel, which was announced in early November. Similarly, in October, the government announced a reduction in import duties on edible oils. Such proactive steps for the economy are welcome.

The last two years have also seen a huge spurt in price volatility across all commodities. By mid-2021, prices for most metals, iron ore, coking coal etc. were more than double the 2020



are at historic highs. A record number of new demat accounts have been opened in the past 18 months, and there has been many high-value IPOs raising huge amounts of capital from retail investors. The government has successfully disinvested the ailing national airline, Air

We just experienced another late but very good monsoon in 2021 and our kharif foodgrain output this year is reached a record 150.5 MT, as compared to 149.56 MT a marginal increase compared to last year. Rice and pulses are again had a good harvest this

prices. Demand rose quickly, and many of the commodities were even reaching historic levels. However, as I write this, most of the prices have since come down and stabilised, which is another positive trend. Also, there has been news of shortages of thermal



From the Quarter Deck

coal for power plants, shortages of urea for farmers and so on. However, the government has ensured that the supply chain is not being hampered, so all industries have been running with interruption.

Indian ports have reported high volumes across all cargo commodities. The 12 major ports, which handle 70% of India's 1.3 billion tonnes annual throughput, had a huge increase in volumes in 2021. During the first nine months of the current financial year (April–December), the major ports experienced a 12.7% growth in volumes. Total cargo handled increased to 524 MT against 466 MT during this period last year. The maximum increase was for thermal and steam coal, which increased by 33% to 72 MT in the nine-month period. Also, POL volumes grew by 10.8% to 159 MT and coking coal by 6% to 37 MT, while iron ore shipments declined by 24% to 38.0 MT and fertiliser imports were down 39% to 5 MT. Container handling grew a whopping 27% in this period, from 6.4 million TEUs to 8.3 million TEUs.

Just to refresh memories, in early 2020, the price of crude oil went into free fall and was traded at negative costs in some transactions. Of course, this was followed by actions like massive chartering of VLCCs and Suezmax vessels for storage, etc. By May 2020, LNG spot prices had fallen to the lowest level in many years. Container lines pulled out tonnage in fear of a huge decline in demand for consumer goods and international trade. There were huge disruptions to trading, shipping and supply chains, which we are still living and coping with.

Now we seem to have come full circle, with crude oil prices not only having recovered but also beginning to touch high figures unseen in the recent past. VLCC freight rates, unfortunately, continue to hover around US\$ 20k per day and spot rates are even down to US\$ 4–5k. Dry bulk carriers did witness a spike in September, but that was very short lived and cape-sized vessels are once again available at US\$ 25k per day. LNG vessels have been the biggest

gainers this year, with spot rates quoted at US\$ 260k per day in October. There is a similar story for the container market, as freight rates are the highest seen in decades. There is a huge shortage of shipping slots on major routes.

It is useful to analyse the implications of this sudden rise in crude oil prices. Will the inflationary pressure and rising prices lead to a slump in demand? Will the higher fuel prices force shipping companies to increase freight costs, with the resultant pain for traders? We have so many concerns about the effects of this sudden rise, and we hope that the international trading and maritime fraternity can restore the balance so that the negative impacts of these rises is avoided.

One of the biggest surprises has been container shipping. Hence, I'd like to give it a special mention. There have been continued shortages of slot spaces and the resultant rise in freight rates over the past year and half. All three major international trade routes, i.e. Asia–Europe, transpacific and transatlantic, are facing major disruption. These have occurred because many of the routes are congested and facing shortages of labourers, containers, and drivers for evacuating the containers from ports and so on. This has caused problem for voyages, with disruptions to voyage times, sailing schedules and feeder ship schedules as well as container availability mismatches and container pileups at the major trans-shipment points.

Disturbingly and unfortunately, this has affected India and India's container trade and ports, as the major shipping lines have had to pull out some of their ships and containers to be deployed in other affected locations. Due to this, we are also seeing a shortage of containers. Despite these major problems and headwinds, EXIM trade is showing strong resilience and growth. Cargo is there and waiting for containers and slots. It is very likely that the major shipping companies will start new services or expand existing services. An exciting prospect is that Indian container ports will see the arrivals of larger ships, hopefully up to 14,000+ TEU capacity.

These are the positives, which we can all look forward to in the near future.

Dear friends and colleagues, we are entering 2022 with a lot more optimism and enthusiasm. 2020 and 2021 have been challenging, disruptive and confusing. Most likely, we all are going to refer to pre-2020 as the Pre-Covid era and 2022 onwards as the Post-Covid era. This phenomenon has been global and has affected everyone. During this period, we have developed closer partnerships with our customers and principals and have had many opportunities to provide critical assistance to them. Looking ahead, we are in a much better position to face the coming headwinds. We expect to see volume growth of at least 20% by the end of 2022. Yes, you read it right, 20%!

On this exciting and optimistic note, let me wish you and your family a happy, healthy and satisfying 2022 and let it be a year of sustainable and profitable growth.

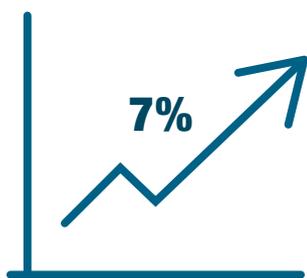
Krishna B. Kotak
Chairman - J M BAXI GROUP



Marine Services

Cruising Resumes In INDIA Post-COVID-19

Until early 2020, cruises were the fastest growing sector of the travel industry worldwide, with demand having increased by 20% over the last five years. In 2018, it was estimated that the world cruise industry was worth approximately US\$ 150 billion with over 50 cruise lines operating more than 270 ships in the world. The influence of the cruise industry on a country's economy can be far-reaching, as it provides substantial employment opportunities for crew members and many small businesses rely heavily on the positive multiplier effect major cruise liners create for the local and national economies.

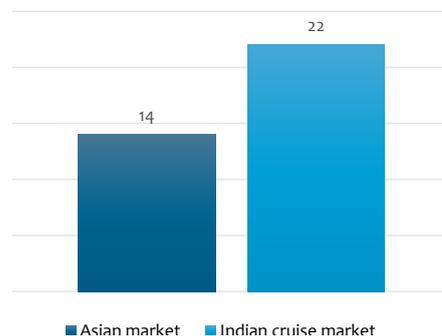


GROWTH OF THE GLOBAL CRUISE MARKET

In 2019, 39 cruise brands were active in Asian waters, deploying a total of 79 ships. These ships provided 1,786 cruises in 2019 with 131 voyages. Many destinations in Asia, especially India,

Malaysia, Indonesia, Singapore, Japan, Hong Kong and South Korea, witnessed a growth in the number of cruise calls.

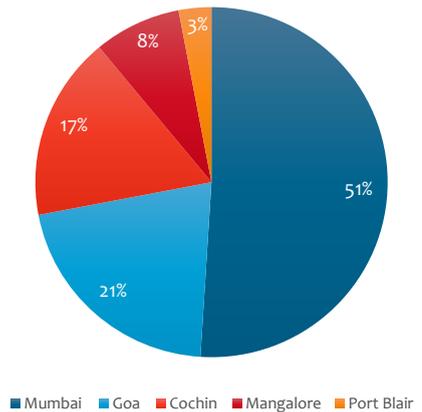
MARKET GROWTH IN 2014 - 2019



India showed a stronger five-year CAGR compared to Asia's average. In 2019, ports in India handled a total of 284 port calls, which included some domestic cruises as well. The Indian cruise market grew at a rate of 22% between 2014 and 2019, which was higher than the overall Asian market, which grew by 14%.

The cruise industry worldwide was adversely affected by the COVID-19 pandemic ever since early 2020, when the first outbreak of a case took place on board The Diamond Princess in the Western Pacific. The vessel

GROWTH IN NUMBER OF PORT CALLS IN INDIA



was quarantined off Japan for two weeks, after which all the remaining passengers and crew were evacuated. Of the 3,711 people on board, 712 became infected with the virus, 567 of the 2666 passengers and 145 of the 1045 crew.

Most countries across the world closed their borders to ships arriving from foreign ports and all foreign-flagged ships were directed to leave their waters. While passengers were quarantined on board for almost a month before being repatriated, a large number of crew members of various nationalities were stranded on board cruise ships across the world.

TOTAL
3711 PEOPLE

2666 PASSENGERS
567 INFECTED

1045 CREW
145 INFECTED

Marine Services

The sudden cessation of cruising resulted in the gains made over the past few years being wiped out almost overnight. Cruise lines had to pay a substantial amount of money in refunds for cancellations and incurred costs associated with docking ships at ports where ships are quarantined. While most cruise ships around the world had to be temporarily withdrawn from service, they still had to operate essential machinery continuously to provide power for onboard services, such as air conditioning, desalination and propulsion. This was necessary to maintain the vessels in good shape. Thus, the lines incurred operating and maintenance costs even when the ships were not sailing. Non-essential staff were repatriated to their home countries to save costs. Some lines had to borrow large sums of money to sustain operations, even with skeleton crews. As time passed, this led to frustration amongst crew members still on the ships, and the cruise lines became desperate to repatriate them to their native countries. As a result, during 2020 alone, 34 ships were sold from one cruise line to another or just sold for scrap.

There was a complete cessation of cruise ship calls from April 2020 till September 2021. Subsequently, cruise lines have staggered the resumption of operations across the world in regions where Covid-19 restrictions have been eased, predominantly in the Caribbean, some parts of the Mediterranean and the South-East Atlantic. The USA and some European countries have permitted recommencement of cruising in a big way, with major companies alluring guests with large discounts and freebies. Early 2022 will see a near normalisation of operations in most parts of the world, albeit with COVID appropriate behaviour and strict protocols. Ships have had to make significant changes to facilities on board, ranging from restrictions in the number of guests that can be accommodated, changes in arrangements for dining and entertainment, plus the introduction of SOPs for shore excursions and procedures to be followed if a COVID

positive case is detected on board a ship while at sea.

Cruise lines have partly set the rules themselves. In general, operators require guests to be fully vaccinated. The current COVID-19 environment has created a high degree of concern amongst the public surrounding the maintenance of health and safety on board cruise ships. Ships now require robust screening and monitoring protocols, implementation of comprehensive sanitation practices with regular inspections, expanded on-board medical facilities and more medical staff. Also, the cruise liners are required to work closely with public health authorities at each destination.

Thus, there was a sense of pleasant happiness when Cordelia Cruises commenced domestic cruise operations in India from September 2021. J. M. Baxi & Co. has been appointed agents for the ship MS Empress, which will be making about 300 calls at Indian ports such as Mumbai, Goa, Cochin, Kadmat Island and Diu over the next two years. The ship arrived at Mumbai and made her maiden voyage on 16 September 21.

Although most international cruise lines have cancelled their calls to India for the ongoing 2021/22 season (September to May), there is a positive trend of bookings for the ensuing seasons from September 2022. Successful cruising by Cordelia Cruises will demonstrate to the world that India, led by J M Baxi & Co, is ready to handle calls by international cruise lines in compliance with the strict and structured health protocols promulgated by the World Health

Organisation (WHO), Cruise Lines International Association (CLIA) and other governing bodies across the world.

The national lockdown did, however, give some ports the opportunity to enhance their infrastructure and support facilities. While Chennai and New Mangalore already had passenger terminals to handle traffic commensurate with the size of ships calling there, Kochi Port inaugurated a brand-new passenger terminal in February 2021. Goa intends to build a passenger terminal, for which the bidding process will shortly begin.

Mumbai is the single largest cruise port in India today. Accordingly, the Mumbai Port Trust is in the process of constructing a new Mumbai International Cruise Terminal (MICT) at the Ballard Pier Extension (BPX) with state-of-the-art facilities to prepare for the rising demand plus increasing traffic from cruise passengers. MICT is the first cruise terminal in the nation built to international standards. The cruise building will be a four-storey structure to serve not only cruise passengers but also SoBo visitors. The J M BAXI Group has won the rights to develop this project, which is due to be commissioned by 2023. The terminal is being planned to provide cruise passengers with a first-class experience based on the latest technology. Moreover, it will be a waterfront destination in the prime location of South Mumbai and will exploit the excellent sea views that the site offers. Once commissioned, Ballard Pier will be a new uber-luxury destination in Mumbai, promoting cruise tourism and domestic luxury experiences.



In Conversation

With Mr ØISTEN JENSEN, Chief Sustainability Officer For ODFJELL SE

Q. Odfjell SE as a company has clearly placed sustainability on the agenda. Why is sustainability important to you?

Ans: Sustainability for us is about having a long-term perspective on the way we do business. It is about the actions we take today for the future of the company and future generations. The best evidence for this way of thinking is our 107-year history, and we plan to be here for the next 100 years as well. To do so, we need to act responsibly and think about our business's long-term effects on people and the planet.

Climate change is one of the biggest challenges of our times. Global warming is caused by increased concentrations of greenhouse gases (GHG) in the atmosphere, mainly from human activities such as burning fossil fuels. To tackle climate change and its negative impacts, 197 countries adopted the Paris Agreement in December 2015. The agreement aims to substantially reduce global GHG emissions to limit the global temperature increase in this century. We have to do our part to achieve the aims of the Paris Agreement

We often talk about sustainability as part of our environmental, social and corporate governance (ESG). Good governance and compliance are essential for gaining the trust of society. A vital part of our governance work is our clear stand against corruption. At the top of our social agenda is the safety of our people and the people who work for Odfjell. Safety is integral to all parts of our business.

Our people are vital for our business to succeed, now and in the future. Our industry will, over the next years, transform into a low- or zero-carbon industry. To achieve this, we need access to talents and new ways of



Øistein Jensen is the chief sustainability officer for Odfjell SE. In this role, he has overall responsibility for sustainability, compliance and strategic safety within the group

Øistein is an executive with extensive experience in naval leadership, management consulting, corporate governance and shipping.

Having served as a submarine captain and as a director of PWC,

Øistein's training includes a bachelor's in military science from the Royal Norwegian Naval Academy and an MBA in business controls. He has also taken various courses on psychology and sustainability. He is a member of the board of directors of the Maritime Anti-Corruption Network.

Odfjell is one of the world's largest chemical carrier companies. Set up in 1914, the company pioneered the development of chemical tanker trades in the middle and late 1950s and the tank storage business in the late 1960s. The company owns and operates a large fleet of sophisticated chemical tankers and has a joint venture network of tank terminals.

thinking. We need to be able to recruit people from all backgrounds, genders and cultures. Diversity is vital for developing high-performance teams. That is why we have set clear targets for diversity.

Failing to operate in a sustainable way presents significant risks to our industry, locally and globally. Climate risk affects all businesses and creates many opportunities for those able to adapt and willing to work to make a positive change. That is why sustainability and safety are integral to our business.

Q. How are the industry and Odfjell working to mitigate climate change?

Ans: Shipping was not directly included in the Paris Agreement. In 2018, the International Maritime Organisation (IMO) responded and launched a strategy to reduce GHG emissions from shipping.

Maritime transport emits 2.9% of global GHG emissions. Due to increasing global demand for seaborne transport, this will increase dramatically if our industry does not reduce emissions. But shipping is also the most environmentally friendly way of transporting large volumes over great distances, making it beneficial for the planet if we move more cargo by shipping. So, shipping is a part of the problem, but also part of the solution.

We have done a complete analysis of our fleet to identify what we need to do to meet the IMO goals. We also identified what reductions could be possible if we really pushed ourselves. This work resulted in new climate goals that go far beyond the IMO targets:



In Conversation

- Odfjell will cut GHG emissions by 50% by 2030 compared to 2008.*
- Odfjell is dedicated to pursuing a zero-emission strategy and will order only vessels with zero-emission technology from 2030.
- Odfjell will have a climate-neutral fleet from 2050.
- Odfjell will actively support initiatives to develop technology and infrastructure to achieve zero emissions and will support international regulations in the drive to attain zero emissions by our industry.

* INTENSITY TARGET

Emissions are based on transport work and the annual efficiency ratio (AER). By committing to these ambitious climate targets, we have set the direction for our work in the coming years. We have to operate safely, be profitable and deliver on our fleet transition plan. We need to do what we can to support the UN's Sustainable Development Goals (SDGs).



Q. What is the major challenge to achieving your long-term climate ambitions and what is your strategy for achieving zero emissions?

Ans: The major challenge for our industry, especially deep-sea shipping, is that there is no commercially available alternative to combustion engines today. We need to find a zero-emission fuel and then build enough infrastructure to supply that fuel to the global fleet. So, this challenge has many owners. We follow all energy carriers, but it is a high risk to bet on one any of them. We believe that zero emissions is not about technology or fuel itself, it is about building a zero-emission fuel infrastructure that we do not control. We want to keep as many doors open as possible, and fuel flexibility is, therefore, part of our strategy.

Q. How has the ongoing Covid-19 pandemic affected your emission reduction plans and goals?

Ans: At the start of Covid, we focused on operations, operations and operations. But generally, I believe that Covid has accelerated ESG activities and intensified society's focus on ESG. Moreover, Covid has speeded up the transition to a low-carbon society. For Odfjell, our plans to reduce CO2 emissions to achieve our targets while continuously focusing on safety and efficiency have not been delayed by Covid.

Q. To comply with the IMO 2020 regulation, why did you choose low-sulfur fuel oil over scrubbers for your vessels? How would you assess this decision now?

Ans: The intention of IMO 2020 was to limit sulfur oxide (SOx) emissions from ships to improve air quality and protect the environment. SOx is harmful to human health as it causes respiratory problems and lung disease. SOx in the atmosphere results in acid rain, which can harm crops, forests and aquatic species and contributes to the acidification of the oceans.

We believe that it was a good decision in all aspects not to invest in scrubbers. First, we think that it was not the intention of the regulation to allow the sulfur scrubbed from air to be dumped into the sea through an open-loop scrubber. We also thought that the fuel producers would quickly adapt to the new market and that the price spread between high-sulfur fuel oil (HSFO) and very low-sulfur fuel oil (VLSFO) would be less than first estimated. Third, we were struggling to make a good business case for scrubbers, given all the factors such as price, payback time, efficiency, energy use, off-hire, technical complexity, running costs, slop disposal, local regulations, etc.

Our organisation was very well prepared for IMO 2020, from fuel contracts to updated procedures. All our vessels were already technically ready. Odfjell has not had issues with the availability of fuel. Moreover, we have had fewer problems with the VLSFO than we have had with the HSFO.

Q. You mentioned that tackling corruption is an integral part of sustainability and the way you do business. How do you work towards this?

In Conversation

Ans: Corruption inhibits economic growth and damages business operations, employment and investment. Corruption limits the realisation of all SDGs in many respects, as the vast sums that are lost to corruption could have been used to improve living standards, such as by increasing access to housing, health, education or clean water.

Fighting corruption is not something that one company can do alone. That is why we are a member of the Maritime Anti-Corruption Network. As an industry, we are taking collective action and standing shoulder to shoulder against any form of corruption or facilitation. Odfjell has a clearly stated zero-tolerance policy on corruption.

Q. What are the core values of Odfjell that drive your collaborations with your partners?

Ans: Our values can be summarised as professional, sustainable, proactive and innovative. These are also the values that drive our collaborations with our partners. We commit to generating value for our customers by offering them safe and reliable transportation and by storing their products at a competitive cost.

Our goal is to deliver on spec and on time and to adapt our services to cater to our customers' needs.

Q. How has Covid-19 affected your interactions with your vendors, partners and clients?

Ans: Maritime trade is all about relations. We are in daily dialogue with all our customers, suppliers, vessels,

agents and other stakeholders. Before Covid, many of our employees travelled extensively to meet with our partners around the world. I visited India multiple times in 2019. Since March last year, we have not been able to do so. Thus, I am impressed by how we, together with our partners, have been able to run our businesses and collaborate, safely and efficiently, worldwide.

I think all of us are looking forward to meeting in person again, but the times have also shown us that it is possible to work efficiently without traveling. This has been an eye-opener for both our partners and us and will probably change the way we think about travel and interactions. Our industry is still all about relations, and we will continue meeting our partners, but our experiences of working purely via digital platforms will continue to increase our efficiency.

Q. Covid caused major challenges for seafarers trapped at sea. How did you handle this?

Ans: Several criteria need to be in place for a successful crew change: a port that allows the crew change, available flights plus connecting airports, and the crew members' home countries have to allow seafarers to travel in and out. Most of these factors all but disappeared when governments closed their borders and implemented travel restrictions due to the Covid-19 pandemic.

The safety and health of our people are our top priority. We took a multi-faceted approach to mitigating the crew change crisis. Our crewing departments worked relentlessly to find solutions in cooperation with our trade teams,

management and agents and with the local authorities. We initiated route deviations to cooperative ports to facilitate safe and efficient crew changes and continuously monitored developments in the ports where our ships were due to call. Different countries had different requirements for ships and seafarers, and we diligently worked to comply with all of these.

Keeping the global supply chain intact is critical, and it would not be possible without seafarers. They are key workers, and we need to ensure their safety and health. We have appealed to governments across the world to allow crew changes and facilitate travel logistics.

Q. In terms of bulk chemical shipments, how does India figure as a supplier and consumer compared to other nations? Do you expect to see more business opportunities in India?

Ans: India is a fast-growing consumer of chemicals, and increased business opportunities are a natural expectation for the future. While India is not a major exporter of chemicals, it is an important hub for chemical tankers heading towards the Middle East after discharging their cargoes. So, in essence, India is an essential element in complementing trades within our market, as we can link its imports with export opportunities from the nearby Middle East.

Q. Are there any challenges with Indian ports and terminals that you wish were better handled?

Ans: Port tariffs are always a concern for all shipowners. Terms and tariffs can vary widely among different ports. We believe that standard policies and tariffs would be beneficial, especially for ports operated by the government. Fast turnarounds are essential to us. So, since our vessels can discharge and load multiple grades simultaneously, we would like the tank terminals to increase their capacity, both for multiple grade operations and for berthing.



Ports & Logistics

J M BAXI HEAVY Successfully Executes For The L&THE SONATRACH ALGERIA Project

Larsen & Toubro Hydrocarbon Engineering Ltd (L&THE), a subsidiary of the Indian conglomerate Larsen & Toubro, are the engineering, procurement, and construction (EPC) and commissioning contractors for Sonatrach SPA's three separate central gas-processing facilities in Adrar Province in Algeria.

Sonatrach SPA is Algeria's state-owned oil company, and the order with L&THE, apart from being a mega order in terms of value, is also a prestigious one and was awarded to the company after an international competitive bidding process.

project of such size and scope demands first-rate logistics.

This was not just another movement, but movements for an entire project, delivered on one chartered vessel after another in rapid succession. Only a high degree of coordination between all entities – the client, the suppliers, the port, the customs teams along with the equipment, axle, puller and trucking teams – could make the operation flow at all, let alone flow safely, economically and in a predetermined sequential manner. Apart from the intense work for documentation, permissions, port area supervision, stowage management, customs and allied clearances, etc., the management of the flow in such large projects is as much a technical problem as it is an art. It takes creativity, foresight and experience to understand and execute the transit, storage sequence and then vessel feeding sequences with their varied timelines and space constraints.

After all, the engineering and construction for the project, despite being in the traditional oil and gas sector, were thoroughly modern. The construction was modularised and standardised across the three sites, and the construction requirements at the foreign locations were to be kept to a minimum. There are obvious advantages of such an EPC method due to the economies of scale by fabricating everything in the same place. However, the resulting logistics demands are concomitantly higher. The large and unwieldy modules had to be collected, stored and loaded onto vessels in the exact sequence in which they would be offloaded and dispatched to their respective sites at the destination, where they would be erected as per the plan. Any rework or unnecessary handling of these items,



apart from being expensive, would also be undesirable, since only expert attention makes handling possible for these modules and keeps them safe from any damage.

That there would be challenges and problems along the way was a given.

J M Baxi Heavy was central to meeting the challenge, and it deployed a seasoned operations manager – a veteran of many such challenges – at the site for an extended time to coordinate the work. The overall team comprised 26 personnel. Of these, two supervisors, six drivers, and six operators and helpers reported to him on site. There were 84 axles and 6 pullers stationed at the location for the assignment. The local Surat-Hazira customs brokerage personnel were also seconded to the operations manager, thereby establishing a strong, integrated and resourceful team to handle the work. Thus, diverse activities – like documentation, customs clearance filings and attendance, customs examinations, port carting and permissions, actual heavy lift movements and dispatch, port receipt, stowage and vessel feed management – were all seen through one lens, thereby providing the seamless service needed to make the challenging logistics a success.

THREE SITES IN ALGERIA

All modules were fabricated in house at L&T's manufacturing facilities at Hazira, State of Gujarat, India.

Site 1 Hassi Ba Hamou and Reg Mouaded fields, 6 MMSCMD

Site 2 Hassi Tidjerane field, 4 MMSCMD

Site 3 Tinerkouk field, 4 MMSCMD

MMSCMD is million standard cubic metres per day (of gas).

For a marquee Indian company to deliver a prestigious foreign EPC



Ports & Logistics

In addition to the regular challenges, there was the Suez Canal blockage, which happened almost immediately after the contract was awarded. The blockage had an immediate impact on the availability of ships, which sent freight rates skyrocketing to levels not seen before. Even at those levels, the demand/supply ratio was disproportionate, and it was extremely difficult to find vessels. Even the largest forwarding companies defaulted on contracts. Despite the situation, the teams successfully executed this contract, showing their strong sense of ownership as they stood by the client.

TO DATE

Vessels handled for the project	10
Export clearances filed	31
Number of ODC packages handled	135
Heaviest module	23 m × 6 m × 6 m , 144 MT
Total number of packages handled	913
Total volume handled	53,334 m3

To find a vessel ready at the time needed with suitable lifting gear and deck arrangements to carry the large number of modules economically required a global reach and connect.



To book a vessel is one thing, but then to feed it on time, without any delays, with all clearances in place while dealing with space constraints at the consignor's warehouse and then again at the port and the congested route in between, all in a compliant and clear manner, is another. The responsibility for feeding the giant modules rested on the shoulders of the team, not for one vessel but for a series of vessels one after the other. The fast and heavy pace of deliveries from L&T's Hazira works had been scheduled before the raging second Covid wave hit India and before the mayhem caused by the bottling up of shipping due to the Suez Canal incident, which occurred just after the first vessel carrying modules for the project sailed. The demands on the team and operations were relentless, 24 × 7, and the team more than met the requirements. The vessels were available on time and the crew and their equipment continued to make safe and compliant deliveries following the company's standards and protocols for managing the unforgiving COVID.



On one occasion, the team simultaneously managed six puller/axle combinations transporting ODCs overnight on a congested road that typically sees more than 5000 trucks going back and forth each night, without any road closures or delays.

Altogether, 32 ODCs were delivered under hook in one vessel, without incurring a hook idle levy.

Last-minute documentation from the client was taken in the team's stride, and clearances were obtained through advanced planning and diligent attendance.

Managing operations at one site can be demanding enough. However, for a time, the project team had to coordinate the documentation and handle the operations for four vessels across three countries and time zones simultaneously, and doing so without any issues whatsoever.

As at the time of writing, 53,334 FRT consisting of 135 ODCs and other cargoes have been collected ex-works and delivered off vessel hook at Algeria. The project is continuing with an estimated 10,000 FRT on two vessels remaining to be manufactured and shipped.

It is a matter of pride for everyone in the teams to be participating in the successful execution of such a large and prestigious foreign project by an Indian company.



Ports & Logistics

INDIA Port Infrastructure: Chemicals

India is the sixth largest chemicals market in the world and the third largest in Asia. The industry has been growing at 1.3 times the country's GDP in the past 10 years and the growth momentum is expected to continue in the near future. Rising consumerism in the domestic market as well as cost competition and proximity to many developing Asian economies are driving the increase of chemicals production in India. There is growing impetus from the government to make India into a production base for specialty chemicals and this drive has accelerated since COVID as Indian products have become accepted as high-quality chemicals in many Western economies. Exports of specialty chemicals such as dyes, pigments and various agro-chemicals have been growing at over 11% per year in the past 5 years and now account for over 50% of total chemical exports out of India.

India presently has a low per capita consumption of chemicals, which at US\$ 103 is just one-tenth of the world average. In comparison, Singapore's per capita is over US\$ 3000 and China's is US\$ 1066. Improving the standard of living in India would mean unleashing demands for construction goods, consumer goods, automobiles and electronics, all of which would have a positive impact on the growth of the Indian chemicals industry.

This industry depends on up to 35–40% imports of feedstocks. Investments announced by various oil refineries and large petrochemical units may lead to this reliance on imports reducing to around 20%. However, it is expected that the Indian chemicals industry will grow from US\$ 125 billion in 2018 to US\$ 300 billion by 2025. This would mean India jumping from sixth to third position in the next 4 years. India's port infrastructure is gearing up to handle this additional traffic of chemicals and

other liquids. Liquid cargoes i.e. crude oil, petroleum products, LPG, acids, edible oil, chemicals etc are handled by most ports in India. There are 125 berths across all ports in India that can handle vessels up to the size of VLCCs, as listed in the table:

PORT	NUMBER OF BERTHS
Budge Budge	6
Chennai	9
Cochin	8
Dahej	3
Deendayal	6
Ennore	1
Goa	3
Haldia	10
Hazira	6
JNPT	5
Kakinada	2
Karwar	2
Kolkata	1
Mangalore	12
Mumbai	11
Mundra	4
Paradip	4
Pipavav	1
Ranpar	1
Sikka	13
Tuticorin	6
Vizag	11
Total	125

While some berths at large ports are dedicated to specific cargo types, like crude oil or petroleum products, others are multi-purpose berths and can handle most liquid cargo types, including oil, acids and other chemicals. Sikka with 13 jetties is the largest port for liquid cargoes and handles the highest volume of petroleum and other liquids. Deendayal Port (Kandla) handles the highest volume of chemicals. It has five jetties equipped to deal with edible oils and chemicals. Because of the petrochemical hubs in the states of Gujarat and Maharashtra, there is a high volume of chemicals passing through the ports in these two states. Already there are expansion plans for additional liquid cargo jetties at the ports of Deendayal and Dahej and JNPT in these states.



Ports & Logistics

In addition to liquid cargo jetties, tanks at port locations are an important part of the supply chain. Limited availability of tanks for specialised chemicals can become a major bottleneck and there are numerous instances of vessels waiting for ullage or even suddenly changing port for want of adequate ullage. A summary of the tanks for edible oils, acids and other chemicals at all the relevant ports in India is as follows:

As can be seen from the table below, there is a total tankage of 5.7 million tonnes for these cargo categories, out of which 2.27 million tonnes is just for chemicals alone. Since another 1.02 million tonnes of tanks can handle multiple products including chemicals, the overall capacity in India for chemicals is about 3.3 million tonnes, which does not include crude oil or petroleum products.

Owing to its proximity to many chemical industries, Kandla has the most chemical tanks in India. It has 343 tanks with a combined capacity of 0.73 million tonnes for storing chemicals. These are operated by 17 different companies. The tanks around the country are managed by private companies with some built on private land in the proximity of a port whilst others are built on land leased by a port trust. All government ports in India have delegated the operation of tanks to private companies and there is healthy competition between them at most locations.

With the planned capacity expansion by many petrochemical units and chemical plants, there is a need for more tanks. Increased activity has already been witnessed in this sector. Some large international players

have bought existing facilities at some locations. This trend is likely to continue as the demand for chemicals is going to grow in step with the growth of the nation's economy. In addition to the tankage at ports, there are ongoing talks on building tanks in the vast hinterland of India. Presently most of the units in the deep hinterland have small, dedicated capacities and there are no common user facilities. Also many units prefer storing chemicals in ISO tanks owing to the smaller volumes as well as the flexibility offered by these tanks. However, this is an expensive mode of storage. With improvements to the logistics infrastructure in the hinterland, operating chemical tanks would be a viable business model at many locations.

Port	CHEMICALS		EDIBLES		NON-DEDICATED		PHOSPHORIC ACID		SULPHURIC ACID		TANK TOTAL	
	No Of Tanks	Total Capacity	No Of Tanks	Total Capacity	No Of Tanks	Total Capacity	No Of Tanks	Total Capacity	No Of Tanks	Total Capacity	No Of Tanks	Total Capacity
Budge Budge	26	39,408	66	209,746	16	51,365			2	20,314	110	320,833
Chennai	35	97,428	1	4,000			3	19,200			39	120,628
Cochin	31	43,963	40	172,920			3	25,500	2	16,400	76	258,783
Dahej					35	351,085					35	351,085
Ennore	27	40,006									27	40,006
Goa	3	3,094	5	16,823			3	22,500			11	42,417
Haldia	20	114,377	63	177,628	22	91,619	8	45,000	1	3,307	114	431,931
Hazira	13	171,907			83	197,859					96	369,766
Jamnagar	4	86,658									4	86,658
JNPT	94	360,682	12	64,300	25	262,000	2	20,000			133	706,982
Kakinada			152	318,393	17	40,750	7	61,000	5	11,000	181	431,143
Kandla	343	734,181	100	248,638			8	80,000			451	1,062,819
Karwar			29	99,372							29	99,372
Kolkata	1	15,000	7	12,309							8	27,309
Mangalore	17	44,925	25	114,229	7	26,710	2	9,709			51	195,573
Mumbai	68	261,719	4	29,289							72	291,008
Mundra	50	98,000	35	215,000							85	313,000
Ranpar	4	40,000			2	8,000					6	48,000
Paradip							7	61,000	7	105,000	14	166,000
Sikka							3	30,000			3	30,000
Tuticorin	9	19,290	16	51,500			7	35,000	9	35,000	41	140,790
Vishakhapatnam	29	107,325	8	26,272			4	40,000	5	8,161	46	181,758
Grand total	774	2,277,963	563	1,760,419	207	1,029,388	57	448,909	31	199,182	1,632	5,715,861



Ports & Logistics

VISAKHA CONTAINER TERMINAL Hard At Work To Reach Carbon Neutrality By 2030: Conscious Custodians For A Resilient Future

A lot has changed over the 105 year history of J M Baxi, but the one thing that has stayed the same is our sense of a higher purpose, which is driving our passion for sustainability.

We are really proud of the investments that we are making to ensure that we are looking around the corner by solving not only today's sustainability challenges but also tomorrow's challenges too.

First, we want to reduce the emissions associated with the generation of energy by heavily investing in solar projects at our terminals.

We also want to choose the types of energy and fuel we use more wisely, so that we can minimise the amount of carbon released by all the equipment at

our terminals. Thus, we are electrifying all our equipment in a phased manner. In the longer term, we will also consider using hydrogen as a fuel.

Visakha Container Terminal is an ideal gateway for container traffic to and from India's east coast. With its well-established road and rail connectivity, it has become a regional hub for trans-shipments.

ELECTRIFICATION OF SEVEN DIESEL RUBBER-TYRED GANTRY CRANES

As we move towards becoming more sustainable, it is critical that we innovate our technology to make the large machines more efficient.

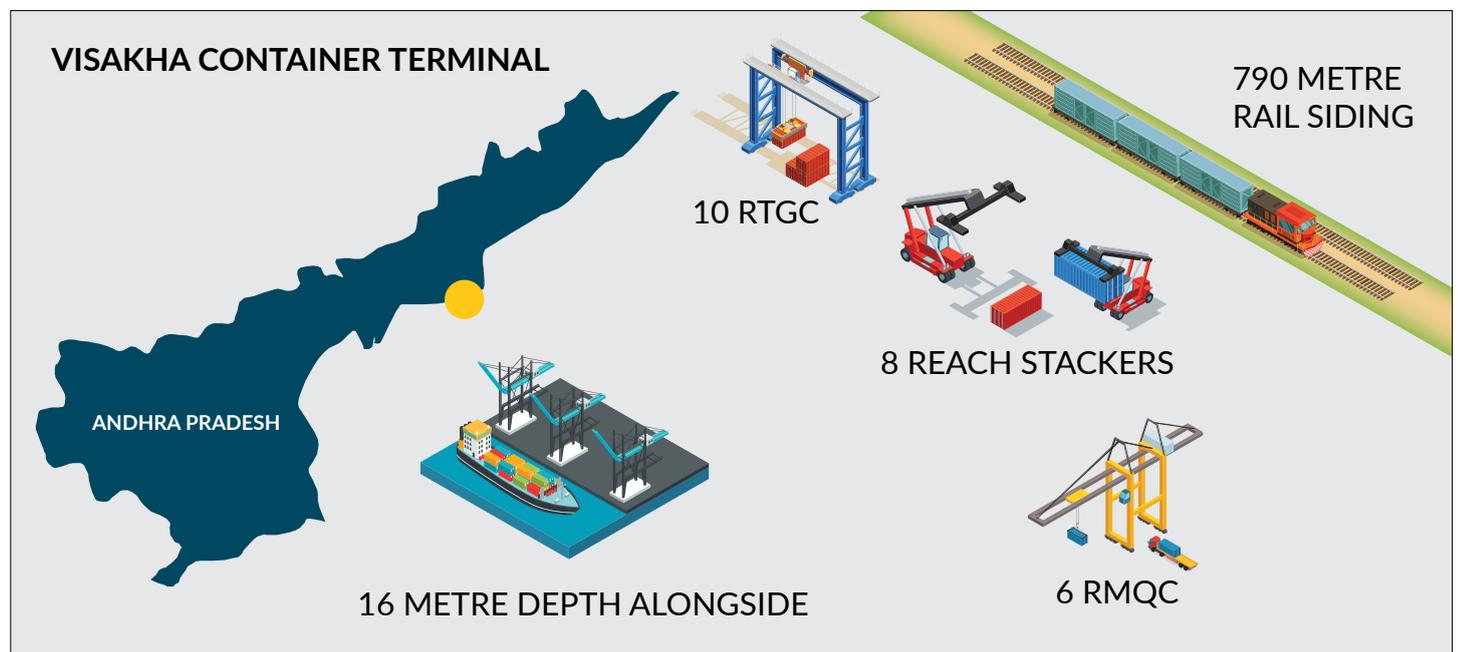
It is estimated that for these seven RTGCs, switching the fuel from diesel

to electric will reduce CO2 emissions by 283 metric tonnes (MT) per RTGC by the end of 2024.

In addition to the electrification of the RTGCs, VCTPL has also installed nine brand-new electric-powered RTGCs at its second terminal.



Reduce CO₂ emissions by 283 metric tonnes (MT) per RTGC by the end of 2024.



Ports & Logistics

YTD 2021: Jan–YTD 2021: Jan–Sep 2021		Total CO2 emissions YTD 2021 (MT)	CO2 emissions saved after RTGC electrification in 3 years (MT)
Electricity consumed YTD 2021 (kWh)	7,17,390	5083	1980
Fuel consumed YTD 2021 (kL)	9,33,572	2500	

INVESTING IN SOLAR

Visakha Container Terminal has signed a contract with Vibrant Energy to procure solar power for a period of ten years. This energy partnership between VCTPL and Vibrant Energy will supply 36 lakh kWh of solar energy to the terminal per year, with a peak capacity of 10 MW.



Will procure 36 lakh kWh of solar energy for the terminal per year

Between January 2021 and August 2021, it supplied 7.85 lakh kWh to the terminal. This solar partnership has had a critical role in replacing fossil fuel usage within the terminal with solar power, thus reducing carbon emissions at the point of power generation. On



Between Jan-Aug 2021, CO₂ emissions were reduced by 217 MT each month

average, CO₂ emissions are reduced by 217 MT each month. Moreover, the solar panels installed at the parking areas in the terminals reduced CO₂ emissions by 4.1 MT between April 2021 and August 2021. In 2020, the amount of solar power consumed compared to the total power consumed at the terminal was 20%.

These are the drivers of the organisation's long-term goals of reaching zero carbon emissions and achieving climate change resilience for a safe, secure and sustainable future.

Lean and sustainability go hand in glove. Lean is all about continuous improvement driving more efficiency.

To ensure we are using our resources better and more efficiently we constantly need to improve our processes, not only to be part of the solution but to make sure we are keeping our people safe when they come to work with J M Baxi. We are striving to become environmental stewards of our resources.

I feel really privileged to be a part of J M Baxi. We are working together towards one purpose, which leaves me in awe of our reach and sophistication. This company, united in its commitment to achieve sustainability, is a source of pride for all of us. We can provide exceptional service to our customers by operating carbon-free terminals, utilising clean and renewable energy sources. Visakha Container Terminal is just the beginning. Moving forward, we plan to approach sustainability like we run our businesses with an operational rigor using lean principles to continuously improve and make sure we're limiting waste,' said Mr K K Krishnadas, President and Chief Operating Officer of J M Baxi Port and Logistics Ltd.

RTGC 3 CONVERTED TO E RTGC



RTGC 2 CONVERTED TO E RTGC



BIRDS EYE VIEW OF VCT



Technologies

Building The Digital Maritime And Logistics Community Portals

We as an industry have and are making progress in adapting and adopting digitalisation. There has been an accelerated growth of many digital transformation initiatives, which are gaining momentum in the new normal. While this benefits us and does away with many of the tedious manual processes for us as a customer, we are often left confused as we have to deal with many disconnected systems. To comply with various regulatory requirements, we are frequently required to submit large volumes of information in multiple documents to multiple stakeholders for multiple processes. Often the same information has to be loaded into different system. Sometimes, we even have to send manual paper forms. All this effort leads to increased compliance costs and is the major barrier to the development of international trade.

International trade
typically involves upto

25

parties with at least

30-40

trade documents generated and

60-70%

of information manually re-entered at least once

The Port Community System (PCS 1x) has made significant progress and stimulated change, but, in a few areas, it needs to be enhanced. For example, the portfolio of services must be expanded, some processes need to be optimised, more standardisation is necessary and more stakeholders must be brought onboard. This upgraded system will be the National Logistics

Portal (Marine) or NLP Marine, which will be a holistic cargo community system serving the needs of end users – importers and exporters in India.

NLP is an inspiring example of the United Nations' single-window concept and has been embraced by several Indian government entities. Under the aegis of the Indian Ports Association, Ministry of Ports, Shipping and Waterways, the system will evolve into the best-in-class globally. NLP Marine is envisaged as a single interface with four interconnected platforms:

1. Cargo Services Platform,
2. Regulatory Bodies Services Platform (including participating government agencies and EPCs
3. Carrier Services Platform and
4. Finance and Insurance Services Platform.

Each platform will be independent but interconnected to serve the specific needs of its own group of stakeholders. With information flowing in multiple patterns and directions, all closely knitted together like spinnerets, the platform will interconnect everything. In a literal sense, it will be a web of services.

The platform provides services for different use cases to facilitate inter- and intra-national movements, including across borders, via inland and coastal waterways, the road and rail networks, and shipping lanes.

Building NLP Marine revolves around a comprehensive and synergistic effort that aims to ensure that the problems faced by the logistics ecosystem are viewed in their entirety and solved with an end-to-end perspective. Development will capitalise on the existing IT solutions created over

time by various stakeholders: logistics service providers, buyers as well as central and state government agencies, such as customs, DGFT, railways, ports, inland waterways, coastal shipping etc.

Engaging NLP Marine will allow both the public and private sectors to harness and embrace the digital way of working. It will pave the way for sustainable economic development. The resulting collaborations will, over time, benefit all stakeholders – cargo owners, logistics service providers, facilitators and digital entrepreneurs – regardless of where they are in the value chain or their size.

NLP Marine is aligned with the standardisation and harmonisation underpinning the upcoming National Logistics Policy. It will be one of the media used to realise the Maritime Vision 2030 for India. By contributing to increasing the ease of doing business and improving our rankings in various other indices, NLP Marine will be a big step along the road on our digital transformation journey as a country.

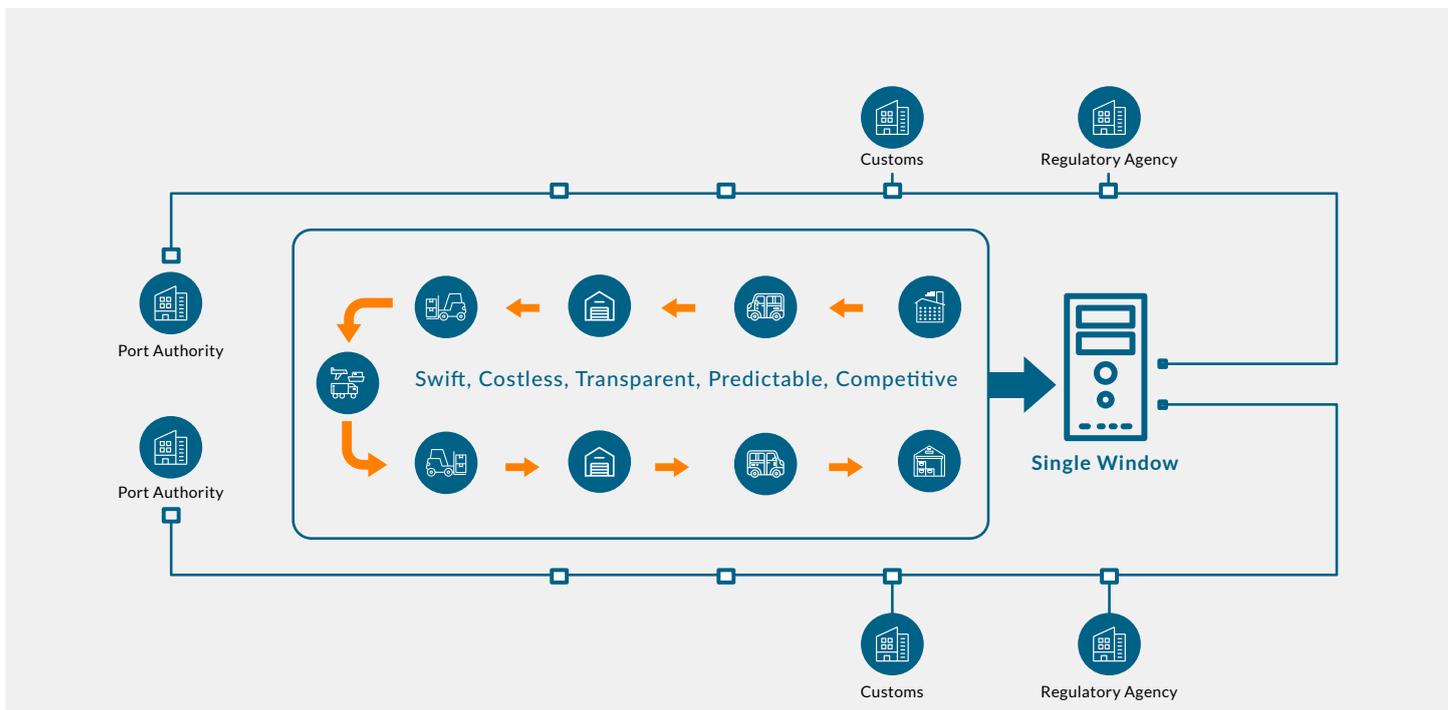
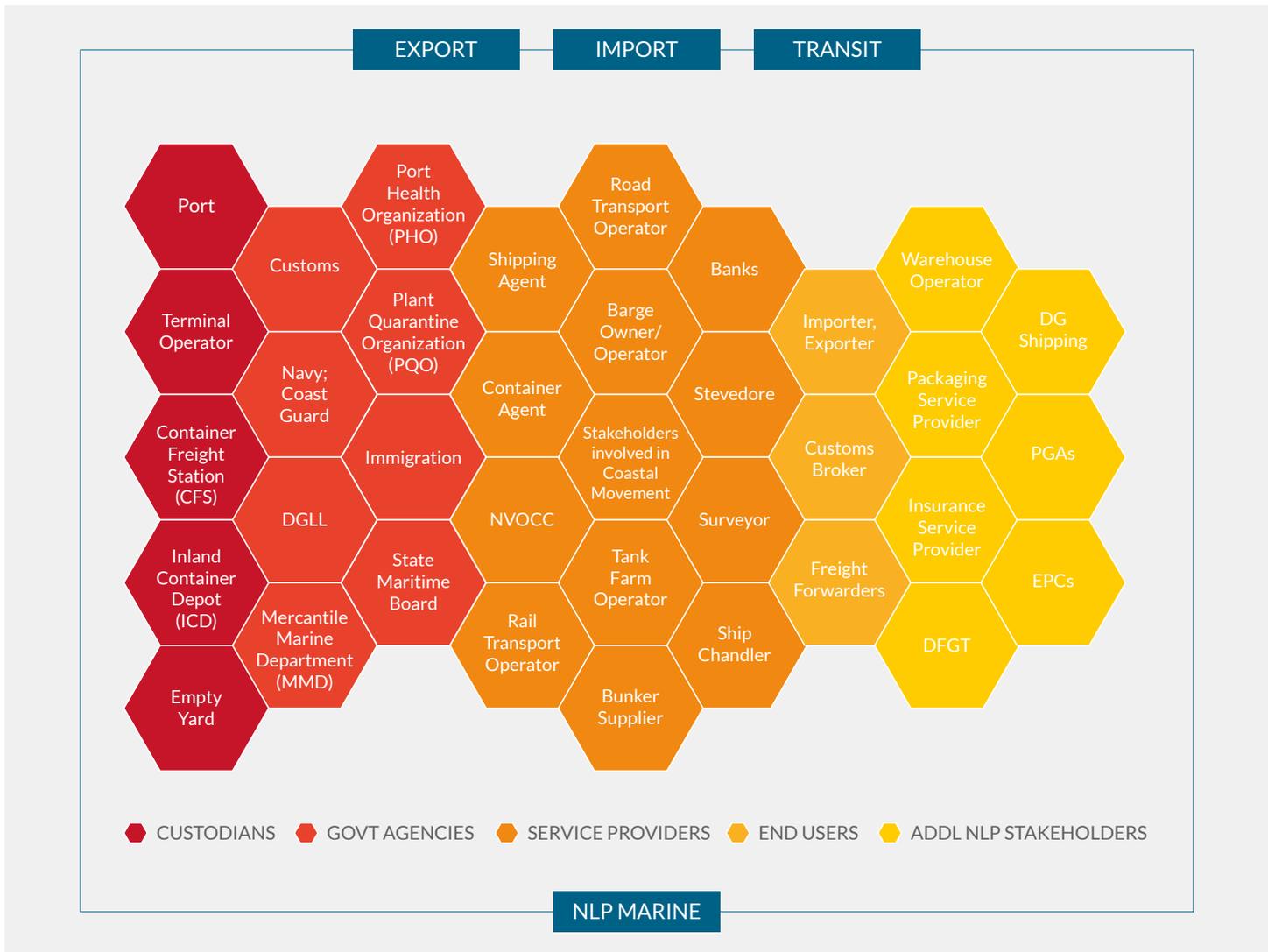
Its power to spur progress, however, will be unleashed only through a well-co-ordinated collaborative approach with a specific focus on optimised and sustainable results.

This needs all of us to curb our desire to go back to the manual parallel processes just because that is the easy thing to do right now. Let us all adopt NLP Marine as “the new normal”.

Building a community system is about change management, changing mindsets and bridging the gaps, not merely concocting code.

Proudly building a single window for the trade, by the trade.

Technologies



In Focus

Impact Of COVID-19 On Women In The Maritime Sector

With the advent of new technology, there are more opportunities for women. However, another reality is that due to the COVID-19 pandemic, any progress we have made in achieving gender parity in the past decades is now at risk, which we need to address.

The impact of this recession or depression is expected to affect women differently to men, as at the start of the pandemic, women, on average, earned less than men and spent more hours doing unpaid work as carers. Post COVID-19, with the increased care demands at home, their jobs and careers will also be affected by losses and cuts.

From past experience of crises, we can predict that if nothing is done to protect women, the limited progress made in recent decades towards achieving gender equality will potentially be nullified by COVID-19, resulting in, among other issues, a decrease in incomes earned by women and a reduction in women's participation in the labour force.

SHORE-BASED ROLES

Recent data show that we have fast-forwarded five years in terms of digital adoption by consumers and businesses. There has been a shift to online shopping, online learning and digital classrooms. Companies are considering letting their employees work fully or partially from home, even after the

pandemic. The increased workplace flexibility is also leading to persistent changes to gender norms, boosting gender equality as happened during and after World War II.

The new, albeit forced circumstances are also making employers take notice of the importance of childcare. Hence, even though women are now carrying a higher burden due to the COVID-19 crisis, gender roles in many families are becoming rebalanced or even reversed. Historically, poor social mobility, lack of networking opportunities and social norms usually kept women out of the traditional employment market. However, now that businesses are having to adjust quickly to the new normal, the need for more



SUSANA BALEKANA

“My advice to women looking to enter the maritime world is to go for it. There is never an end to learning new things. It is challenging and fun”

Job: 1st Officer/Master

Country: Fiji

Association: Fiji Women in Maritime (Fiji WIMA)

My Job Involves...

I am a 1st Officer and Captain on board the Blue Lagoon Cruises M. V. Princess at Port Denarau, Nadi in the Fiji Islands. It's a small cruise liner that takes guests on 3, 4 and 7 night cruises to experience the magical Fiji Islands.

I am also the Vice President for Fiji Women in Maritime, commonly referred to as Fiji WIMA, which promotes education, training and career opportunities for women - especially in the maritime community.

How IMP has helped

In 2015, I received a Certificate of Recognition of Women in the Shipping industry from the Maritime Safety Authority of Fiji (MSAF). I represented Fiji at the Regional Conference on the Development of a Global Strategy for Women Seafarers Conference in Busan, Rep. of Korea, 2013.



Why Maritime?

I was raised in Wailevu Village on the island of Kadavu where boats were the only means of transportation to and from. It all started from there, I qualified as a captain 14 years ago and I'm still at it. My love for the sea, dedication and the support from my family has got me where I am today.

Professional Aspiration

I plan to further my studies on Shipping Management overseas.



In Focus

innovative and more diverse teams has become increasingly urgent, which is encouraging firms to hire more women.

WOMEN SEAFARERS

The public soon became aware of the suffering caused by COVID-19 to seafarers, such as deteriorating work conditions, the stress of not being allowed onshore, the shortages of hygiene and medical products on ships not allowed to berth, etc. Imagine then, the situation of female seafarers, who had to endure all the same indignities as their male counterparts plus more.

From our side, even though many of the consequences of the crisis were beyond our control, the consequences of the way we lead are not. The right way to lead is by engaging everyone and by striving to ensure the maritime industry becomes sustainable.

WHAT CAN COMPANIES DO? MAKE DIVERSITY A STRATEGIC GOAL

While most organisations claim that diversity is a priority, many, nevertheless, fall short. A recent survey by Allegis found that while 72% of respondents reported having a diversity and inclusion strategy – or were at least writing one – only 37% said that diversity plays a role in their hiring goals. If companies want to become more diverse by recruiting more female candidates, this has to change. Diversity of all kinds must become a strategic hiring goal, one that is supported from the very top of an organisation.

Despina Panayiotou Theodosiou, president of WISTA International, believes that the increasing awareness of the women in the maritime industry will help to ease the pressure on them and encourage discussions for change. 'The global pandemic has increased the pressures, both financially and mentally, for women and men, who have to balance their work commitments with family life. Working from home is not always easy, especially in the maritime world as the pressure increases. But the role of women in any household, especially one with children or elderly

family members, means they are, in many ways, under greater stress due to their housework obligations. There is a huge potential for redefining the roles of women in the maritime industry. This is an ideal opportunity to re-examine roles, create new career opportunities and give women the support they need.'

STUDY ON THE "IMPACT OF COVID-19 ON WOMEN IN MARITIME INDUSTRY" A COLLABORATION BETWEEN THE DIVERSITY COMMITTEE OF WISTA INTERNATIONAL AND THE FEDERAL UNIVERSITY OF ESPÍRITO SANTO (UFES)

Sanjam Sahi Gupta, a member of the executive committee of WISTA International and co-chair of its Diversity Committee, thinks that the data gathered by this survey will assist in making informed decisions about the future. 'While we all know and talk about the impact of COVID-19 on women, it's important to get data that provides indisputable evidence. We need to use these data instead of assumptions, which might lead to incorrect conclusions. The findings will help us find the gaps and empower us to make informed decisions to support women.'

Fabiana Simões Martins, a member of the executive committee of WISTA International and co-chair of its Diversity Committee, believes that now, more than ever, the maritime industry should place gender equality

high on its agenda. 'At the stage we are at now, it is clear that COVID-19 accelerated change and brought challenges to all, but specifically to women, threatening gender equality goals for the coming years. It is the role of good leaders to engage everyone and put equality in the centre of the agenda toward a sustainable and global recovery. The way to start is by understanding the new challenges that women face globally, and this is the aim of WISTA International's COVID survey.'

SCOPE OF THE STUDY

- » The study will cover the impact of COVID-19 on the professional and personal lives of women working in the maritime industry.
- » The universe of the study will be 3800+ WISTA members from over 54 NWA's.
- » The study will be conducted through digital tools to ascertain qualitative and quantitative data.
- » Descriptive and inferential analysis will be done for the qualitative data of a number of in-depth case studies.
- » Findings could be considered to understand the impact of COVID-19 on women in maritime, changing job roles, opportunities and challenges. (Could be used to make policy recommendations to support women in maritime).



Weights & Measure

Indian Basmati Rice – “The Scented Pearl”

Basmati occupies a special status in Rice cultivation. Blessed with characteristics like extra- long slender grains that elongate at least twice of their original size with a soft and fluffy texture upon cooking, delicious taste, superior aroma and distinct flavour. Basmati rice is unique among other aromatic long grain rice varieties.



In India, Basmati rice is grown in the specific geographical area, at the Himalayan foothills confined into few states of India. These states are located at northern parts of the country e.g., Punjab, Haryana, Himachal Pradesh, Uttarakhand, Western UP, Delhi, Bihar. There are 34 varieties of Basmati rice been notified under the seeds Act, 1966, to name few globally know and demanded varieties are Basmati 217, Basmati 370, Kasturi, Haryana Basmati, Pusa Basmati, Vallabh Basmati etc.

In India, Basmati rice is mainly grown for exporting purpose. It accounts 75% of global Basmati rice production. In the financial year 2020-21, India exported around 4.6 million tonnes of Basmati rice worth USD 6.5 billion. Whereas comparably if we see from non-Basmati rice, country generated USD 3.5 billion even if exporting 13.8 million tonnes, which is more than doubled amount of Basmati rice exported. So, very clearly the importance of Basmati Rice production in our country can be understood here. Agro - Climatic conditions of the

specific geographical area as well as method of harvesting, processing, and aging attribute these characteristic features to Basmati rice, therefore this glistening jewel is an undisputed centre - piece of India's impressive array of cereals & grains. Blessed with a unique aroma that has given it the deserved sobriquet 'Scented Pearl'.



STATE WISE BASMATI PRODUCTION

India is the largest producer and exporter of basmati rice in the world. The annual production in the country hovers at around 8 - 12 million tons a year, of which around two-thirds is exported. The remaining is consumed, within the country.

Basmati rice is mostly grown in the traditional areas of north and northwestern part of Indian sub-continent for many centuries. The super-fine best quality of Basmati rice is produced on either side of Indus valley in India.

The total area presently under cultivation of Basmati rice is about 1,563,000 hectares in India and its production estimated at about 5,609,000 tonnes during 2019-20. The largest area under Basmati rice is in the State of Haryana (669,000 hectares) followed by Punjab (553,000 hectares) and then Uttar Pradesh (273,000 hectares). During 2019-20, the State of Haryana contributed 2,490,000 of the total Basmati rice production in the country followed by Punjab at 2,148,000 and Uttar Pradesh at 809,000.

However, the basmati has seen drop of 10% in the output this year, largely due to an estimated 11% fall to 2.3 million tonnes in the crop in Haryana, the biggest producing state in the aromatic rice variety. According to the latest estimates, the basmati rice production in the country will drop further 10% to 8.08 million tonne in 2021-22 crop year (July-June).

STATE WISE BASMATI RICE SCENARIO - 2019-20

States	Area ('000 Ha)	Production (000'tonnes)	Yield (tonnes)
Haryana	668.70	2490.00	3.71
Punjab	552.70	2147.70	3.89
UP	272.70	809.40	2.97
Others	69.50	161.50	2.32
India	1563.40	5608.60	12.89

RICE CULTIVATING DISTRICTS OF INDIA

State	Districts
Haryana and Punjab	Karnal, Panipat, Kurukshetra, Kaithal, Amritsar, Fategarh, Gurdaspur, Basmati Hoshiarpur, Jalandhar, Pataila, Sangrur, Roopnagar
Himachal Pradesh	Kangra, Solan, Una, Mandi, Sirmour
Rajasthan	Bundi
Uttar Pradesh	Saharanpur, Muzaffarnagar, Pilibhit, Bareilly, Bijnor, Moradabad, Jyotibaphule Nagar, Rampur, Sitapur & Rae Bareli
Uttarakhand	Udham Singh Nagar, Haridwar and Dehradun

Weights & Measure



EXPORTS OF INDIAN BASMATI RICE

Basmati rice is increasingly becoming the choice across consumer groups mainly because of its superior taste and aroma that is highly pleasing to the senses. This gives India huge potential of exporting Basmati rice around the world. Out of the total global rice consumption, global Basmati rice consumption is expected to increase by 5.7%.

Share of Basmati rice in the total Indian rice exports has been hovering in the range of 30% to 40% while non-basmati rice contributes to 60 to 70% of rice exports. India exports Basmati rice to almost 132 countries across the world every year and the major export destinations for Indian Basmati rice are Iran, Saudi Arabia, UAE and Iraq. In 2020-21 India exported 13 million metric Tonnes (MMT) non-basmati rice and around 4.5 MMT basmati rice— which comes to around 17.5 MMT rice. It is more than 37 per cent of the total world export (47 MMT).

India, Thailand, Vietnam, and Pakistan are the main four major rice exporting countries. In the last fiscal year, India's rice export was more than the cumulative exports of the other three major exporting countries—Thailand, Vietnam, and Pakistan mainly due to the panic buying during pandemic situation.

DESTINATION COUNTRY	QTY IN MILLION TONNES
Saudi Arab	1.35
Iran	0.75
Iraq	0.65
Yemen Republic	0.34
U Arab Emts	0.23
U S A	0.18
Kuwait	0.18
U K	0.17
Qatar	0.11
Oman	0.10

- » Basmati exports expected to rise on New Crop arrivals, Buyers get clear picture on the Market situation. However, the area under Basmati, particularly PUSA Basmati-1509, was lower this year, resulting in prices rising by 30 per cent which will benefit to farmers.
- » Due to the Panic Buying situation India's exports of basmati rice to Belgium have increased 60% in the first Nine months of the current financial year, while imports by the Netherlands have almost doubled. Rising demand for basmati rice in these European countries has resulted in a better price realisation for farmers, mainly from the basmati rice-growing areas in Punjab and Haryana. The common variety of basmati rice, 1121 Pusa, which is mostly exported, has been fetching a 15% higher price.



European Union (EU)

Protected Geographical Indication (PGI), or GI tag

Getting the GI tag enables countries holding the right to prevent a third-party from using the tag if their product does not match up to the pertinent standards. This status would provide India a monopoly over basmati rice markets in Europe, as names of products registered as GIs are legally protected against imitation and misuse within the EU and in non-EU countries where a specific protection agreement has been signed.

The GI tag for Indian basmati can boost the country's exports to the European markets from the current \$250 million to \$500 million. In 2020-21 Basmati rice provided better returns, at a price of \$868 or Rs 63,575/ tonne, which is double the non-basmati rice export price at \$366 or Rs 26,800/tonne.

COMPETING COUNTRIES ANALYSIS FOR NEWER DESTINATION FOR INDIAN BASMATI RICE

Top 5 Destination Countries	India's share in Destination Country's imports (Lakh Tonnes)	Competing Countries	Share of Competing Country's Exports
South Africa	27.8	Thailand	64.6
South Africa		United Arab Emirates	2
South Africa		Hong Kong China	15
Malaysia	8.1	Thailand	51.1
Malaysia		Vietnam	26.4
Malaysia		Cambodia	8.6
Yemen	65.2	Thailand	19.8
Yemen		Pakistan	9.8
Yemen		Korea	1.8
France	6	Italy	30.4
France		Thailand	15.6
France		Cambodia	15.3
Kuwait	91.5	Thailand	2.8
Kuwait		Australia	2
Kuwait		Pakistan	1.6



Weights & Measure

According to Union Commerce ministry and All India Rice Exporters Association data, India exported \$245.4 million worth of basmati rice to the EU in 2020-21 as against \$207 million in 2019-20. In quantitative terms, it was 2.88 lakh tonnes compared to 2.11 lakh tonnes the previous year.

Iran

The basmati rice export from India to Iran has plunged from \$1,559.63 million in 2018-19 to \$590.67 million in 2020-21. Pakistan is seeking to benefit from India's falling exports to Iran. Iran may also not start importing basmati rice from India until a political resolution is in place as owing to US economic sanctions, New Delhi stopped importing crude oil from Tehran.

China

China is relatively new market for Indian exporters, despite of this China has already inspected & cleared 5 additional rice mills in India (from the previous 19) for exporting non-basmati rice & the phytosanitary measures have also been updated to include such exports. If India can continue to prevent pests from infecting, especially the khapra beetle for basmati rice, this can prove to be profitable as well as new routes for basmati also in the long run.

Saudi Arabia

The demand from Saudi Arabia may be flat or slightly lower, further exports from the India will depend on the geopolitical developments. As Saudi Arabia imports half of its basmati requirements from India.

meanwhile, has followed the proper procedure for several years for the GI. "Basmati GI can be granted to India, and EU may decide later if at all there is any claim filed by Pakistan. Nepal has been growing aromatic rice like many other states outside the basmati zone, but all aromatic rice cannot be termed basmati.

Egypt plans to start cultivating basmati rice to cut the country's \$100 million annual import of the aromatic staple. Egypt may not be able to export to Europe since India has obtained a Geographical Indication (GI) tag for its Basmati rice there. But it could face problems if Cairo ships out the fragrant rice to nearby countries such as Syria, Jordan, Iran, Iraq, United Arab Emirates and Saudi Arabia.

Logistical Bottleneck

Higher ocean freight rates and shortage of containers continue to hamper Basmati rice exports from India. Basmati rice exports from India dropped by about 15 per cent during the April-September period of the current fiscal compared with the same period a year ago. Ocean freight charges have increased by 300 per cent year-on-year on revival of demand for goods, after a slump witnessed during the Covid pandemic. Empty supply pipelines caused by lockdowns, have also contributed to the surging demand. This has also led to a shortage of containers. Some exporters have resorted to exporting commodities using break bulk ships, but their availability is low. According to APEDA data, Basmati exports during April-July

were 1.43 million tonnes (mt) valued at ₹ 8,975 crore, compared with 1.68 mt valued at ₹ 11,342 crore during the year-ago period.



THE PATH AHEAD...

The report "Rice Industry - Emerging Contours" released in October 2021 is optimistic about the future of the rice industry in comprehensive rice strategy, with a focus on new systems, technologies, and new rice seed varieties. It lists the government initiatives on bringing about structural changes in the sector and the efficient ways to reduce the extent of dependence on the vagaries of the monsoon.

Despite some significant region-specific differences, generic factors such as government support in rice production, favourable monsoon, rising number of rice processing companies and increasing exports have positively impacted the Indian rice industry.

The report states that in both kharif and rabi seasons rice production has increased over the years. The total production rose by about 15 per cent between 2013-14 and 2020-21. Rice (including basmati and non-basmati) occupy a major share (more than four-fifth) in the country's total cereals export basket. Telangana, Tamil Nadu, and Andhra Pradesh constitute over 80 per cent of the total area under paddy cultivation, which rose from 30 lakh hectares in FY20 to 35 lakh hectares in FY21.



POST COVID INDIAN BASMATI RICE MARKET

Threat to Indian Basmati rice exports from Nepal and Egypt. Nepal is planning to increase area under aromatic rice and wants to sell it as basmati, which is threat to India's efforts in getting a geographical indication (GI) for the rice variety. What is likely to work in India's favour is that neither Pakistan nor Nepal has filed a claim over the basmati variety, and both have merely filed objections. India,



Port Statistics

SHIPPING & CARGO PERFORMANCE

QUARTERLY UPDATES ON INDIAN MAJOR & MINOR PORTS (QTY IN MILLION TONNES)
APRIL - JUNE 2021 (1st QUARTER) 2021 - 2022 / APRIL - JUNE 2020 (1st QUARTER) 2020 - 2021

AGRICULTURAL PRODUCTS & EXTRACTIONS

	SUGAR		RICE		SOYA BEAN MEAL		RAPE SEED MEAL		COPRA EXPELLER CAKE	
	1 st Qtr'21	1 st Qtr'20								
No of Ships Called	66	37	79	12	8	0	5	0	7	4
Total Cargo handled	1.820	0.880	1.410	0.170	0.200	0.000	0.080	0.000	0.060	0.030
Import	0.280	0.170	0.010	0.000	0.010	0.000	0.000	0.000	0.060	0.030
Export	1.540	0.710	1.400	0.170	0.190	0.000	0.080	0.000	0.000	0.000

FINISHED FERTILIZERS & FERTILIZER RAW MATERIALS

	UREA		SULPHUR		ROCK PHOSPHATE		DAP		MOP	
	1 st Qtr'21	1 st Qtr'20								
No of Ships Called	38	42	18	16	74	47	23	38	27	31
Total Cargo handled	1.591	1.847	0.552	0.590	2.206	1.850	1.112	1.550	0.816	1.120
Import	1.591	1.822	0.333	0.220	2.206	1.850	1.112	1.550	0.816	1.120
Export	0.000	0.025	0.219	0.370	0.000	0.000	0.000	0.000	0.000	0.000

COAL AND COKE

	NON COKING COAL		COKING COAL		MET COKE		PET COKE		OTR GRADES OF COKE	
	1 st Qtr'21	1 st Qtr'20								
No of Ships Called	784	601	308	257	26	7	25	87	17	21
Total Cargo handled	58.520	42.220	16.910	13.420	0.630	0.180	0.810	3.480	0.380	0.330
Import	51.580	35.680	16.800	13.350	0.470	0.160	0.720	2.970	0.330	0.270
Export	6.940	6.540	0.110	0.070	0.160	0.020	0.090	0.510	0.050	0.060

OTHER BULK & BREAK BULK CARGO

	CEMENT		MINERALS		IRON ORE		STEEL PRODUCTS & PROJECT CARGO		GRANITE	
	1 st Qtr'21	1 st Qtr'20	1 st Qtr'21	1 st Qtr'20	1 st Qtr'21	1 st Qtr'20	1 st Qtr'21	1 st Qtr'20	1 st Qtr'21	1 st Qtr'20
No of Ships Called	135	86	379	309	500	460	415	410	59	36
Total Cargo handled	1.860	1.420	15.140	12.190	26.320	24.020	4.730	6.030	1.370	0.750
Import	0.990	0.770	11.370	8.370	6.080	4.710	1.060	1.110	0.000	0.010
Export	0.870	0.650	3.770	3.820	20.240	19.310	3.670	4.920	1.370	0.740

LIQUID CARGOS AND LIQUIFIED GASES

	CRUDE OIL & OIL PRD		CHEMICALS		EDIBLE OIL & MOLLASSES		ACIDS		LIQUIFIED GASES	
	1 st Qtr'21	1 st Qtr'20								
No of Ships Called	1305	1260	675	517	323	274	163	126	365	388
Total Cargo handled	82.370	79.000	7.700	5.100	4.224	3.168	1.730	1.640	10.850	11.879
Import	62.780	58.370	5.310	2.620	3.800	3.003	1.730	1.602	10.740	11.655
Export	19.590	20.630	2.390	2.480	0.424	0.165	0.000	0.038	0.110	0.224

INDIAN PORT PERFORMANCE - Q1 & FY 2021 - 22 THROUGHPUT (QTY IN MILLION TONNES)

APRIL - JUNE 2021 (1st Quarter) 2021 - 2022 / APRIL - JUNE 2020 (1st Quarter) 2020 - 2021 (QTY IN MT)

Ports	Types of Ports	NO. OF SHIPS		LIQUID CARGO		BULK CARGO		CONTAINERS (TEUS)		TOTAL CARGO *	
		1 st Qtr'21	1 st Qtr'20								
KANDLA	■	609	543	3,349	3,015	7,488	6,549	127,849	97,718	10,837	9,565
MUMBAI	■	478	380	6,765	5,719	1,119	1,285	-	-	7,884	7,004
JNPT	■	172	140	1,502	1,427	0,191	0,078	1,363,702	847,849	1,693	1,505
MORMUGAO	■	100	121	0,125	0,068	4,738	5,605	-	-	4,863	5,673
MANGALORE	■	339	301	5,498	6,754	3,441	2,528	-	-	8,939	9,282
COCHIN	■	222	270	5,291	4,098	0,448	0,276	159,119	112,803	5,739	4,374
TUTICORIN	■	228	250	0,268	0,398	4,048	4,254	199,364	153,947	4,316	4,652
CHENNAI	■	161	141	3,029	2,403	0,345	1,220	400,844	212,581	3,374	3,624
ENNORE	■	176	125	1,103	1,135	5,848	3,564	113,517	36,494	6,951	4,699
VISAKHAPATNAM	■	520	462	4,016	5,096	11,233	9,203	126,389	114,459	15,249	14,298
PARADIP	■	540	519	9,537	8,628	19,920	19,425	2,640	-	29,457	28,053
HALDIA	■	432	407	3,145	3,024	5,448	5,316	48,123	29,096	8,593	8,340
KOLKATA	■	23	22	0,008	0,105	0,071	0,033	142,473	102,451	0,078	0,137
GANGAVARAM	■	117	110	0,000	0,000	8,331	6,962	-	-	8,331	6,962
PIPAVAV	■	86	83	0,147	0,210	1,547	1,345	149,952	186,166	1,695	1,555
MUNDRA	■	834	610	6,484	4,352	9,611	8,101	1,605,672	970,937	16,095	12,454
DAHEJ	■	140	123	4,809	4,864	2,043	0,931	-	-	6,852	5,795
HAZIRA	■	270	146	3,663	2,214	7,455	1,518	172,781	130,690	11,118	3,733
NAVLAKHI	■	30	22	0,000	0,000	2,578	1,224	-	-	2,578	1,224
KAKINADA	■	193	198	0,683	0,748	2,838	3,002	1,212	7,241	3,521	3,750
SIKKA	■	344	408	31,267	31,436	0,000	0,053	-	-	31,267	31,489
VADINAR	■	133	127	13,472	13,051	0,000	0,000	-	-	0,000	13,051
KRISHNAPATNAM	■	203	203	0,415	0,386	10,285	7,938	83,836	92,410	10,700	8,324
KATTUPALLI	■	10	5	0,071	0,040	0,040	0,024	106,145	93,136	0,111	0,064
BHOGAT	■	4	2	0,340	0,123	0,000	0,000	-	-	0,340	0,123
Total Vessel Calls at all ports		6,364	5,718	104,989	99,294	109,066	90,435	4,803,618	3,187,978	200,583	189,729

■ Major Port ■ Non-Major Port

* Total Cargo Includes Liquid Cargo, Bulk Cargo and Other Cargoes and Excludes Containers

MARINE SERVICES

J. M. BAXI & CO.

BOXCO SHIPPING SERVICES

UNITED LINER SHIPPING SERVICES

ARYA OFFSHORE SERVICES

CONTAINER MOVEMENT
(BOMBAY) TRANSPORT

"K" STEAMSHIP AGENCIES

TECHNOLOGIES

DIABOS

PORTALL

ARYA WATER

ARYA INFOSYSTEMS

ARYA COMMUNICATIONS &
ELECTRONICS SERVICES

PORTS & LOGISTICS

PROJECT HEAVY LOGISTICS

COLD CHAIN LOGISTICS

BULK LOGISTICS

RAIL LOGISTICS

KANDLA CONTAINER TERMINAL

HALDIA CONTAINER TERMINAL

VISAKHA CONTAINER TERMINAL I

VISAKHA CONTAINER TERMINAL II

VISAKHA CONTAINER FREIGHT STATION

MUMBAI CONTAINER FREIGHT STATION

MUMBAI WAREHOUSING AND LOGISTICS
PARK

DELHI INLAND CONTAINER TERMINAL

PARADIP MULTI PURPOSE TERMINAL

ROZI BULK TERMINAL

