LIGHT HOUSE

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6 Billion Tonnes Of Sand Dredged Annually From Oceans Causing Irreversible Damage To Marine Life, UN Warns

Karthik Raj - GME.,

About six billion tons of sand is being extracted yearly from the floor of oceans, resulting in irreparable damage to benthic life, as per a global data platform on sand as well as other kinds of sediment extraction in the marine environment.

The brand new data platform titled the Marine Sand Watch has been built by GRID-Geneva, a Centre for Analytics in the UN Environment Programme (abbreviated the UNEP).

The platform will help track and also monitor dredging activities of silt, gravel, sand, clay, and rock in the world's marine environment, including the hotspots such as the North Sea, the East Coast of the US, and Southeast Asia, a statement by the UNEP said on 5 September 2023.

It is likely to offer information on the areas utilized for sand extraction (concessions), areas of capital and maintenance dredging, number of vessels and operators, sand trading ports or hubs, and the extraction of sediment as well as other kinds of activities by nations with their Exclusive Economic Zones.

For this, it is going to make use of Automatic Identification System signals of ships as well as Artificial Intelligence for identifying operations of dredging vessels.

The platform has further estimated that between four and eight billion tons of sand are being dredged from the ocean floor each year. Further alarmingly, the number is also expected to go up to 10–16 billion tons each year, which happens to be the natural replenishment rate or the amount that rivers require to maintain marine and coastal ecosystem structure as well as function.

The extraction of sand boosts the turbidity of water. It alters nutrient availability and also results in noise pollution, affecting marine organisms massively.

Not just the benthic organisms, people who live in the coastal communities will be severely impacted by the magnitude of sand dredging, as per the UNEP statement.

Coastal/Near-shore extraction can impact the salinization of aquifers and future tourist development.

Some nations — including Malaysia, Vietnam, Indonesia, Thailand, and Cambodia — have reportedly banned marine sand export in the past 20 years, while others lack legislation and effective monitoring programs.

The UNEP had reportedly called for improved monitoring of sand extraction and the use in

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the 2022 Sandand Sustainability report. It had recommended pausing sand extraction on pristine beaches as well as other active beach and nearshore sand systems for mining sand as a resource and also for establishing international standards when it comes to sand extraction in the marine environment.

The statement further added that the UNEP/GRID-Geneva plans on further refining the data and developing a new version of the platform to be capable of moving close to near-real-time monitoring and improving the detection capacity closer to 100% of dredging vessels, and differentiate between the classes of vessels and other related activities, per the statement.

Courtesy : Marine insight

Singapore's Innovative Ocean CO2 Removal Project to Play a Decisive Role in Fighting Climate Change

Varun Dabeghatta Venugopal

Singapore has been planning on expanding a pilot assignment that promotes the ocean's capacity for absorbing carbon dioxide emissions, using one of the many emerging technologies that the supporters hope can have a highly decisive role in the worldwide battle against climate change.

As researchers call for further research into ocean carbon dioxide removal (abbreviated OCDR), PUB, Singapore's national water agency, has developed a plant that makes use of electricity for extracting CO2 from seawater, permitting it to absorb more and more greenhouse gas from the atmosphere as it gets released into the ocean.

The project, built at a desalination facility on the western coast of Singapore, extracts 100 kilograms of CO2 a day using technology designed by U.S. company Equatic, founded by the researchers at the University of California, Los Angeles (popular as UCLA).

At the plant, seawater is run via an electrolysers that converts dissolved CO2 into calcium carbonate and generates hydrogen.

PUB is planning on securing funds by the end of the year for building a demon--stration plant with a daily capacity of approximately 10 tons, and is also going to think of expanding beyond, mentioned Gurdev Singh, a PUB GM who leads this project.

We have shown that the technology works, but the key is to enhance the technology and at scale, he mentioned.

The Intergovernmental Panel on Climate Change

CONTENTS

(abbreviated IPCC) has said that the removal of CO2 in the atmosphere is going to be as crucial as cutting down emissions when it concerns curbing the temperature rise.

But as OCDR has been described by an environmental group as the "unsung hero" in the fight against global warming, it stays unclear if new technologies are feasible when those are deployed at scale.

Gaurav Sant, Equatic's founder stressed the commercial potential.

What will make this a resilient commercial facility is that one can get the same equipment to give two products: hydrocarbon credits and hydrogen, he mentioned.

It could profit by selling the calcium carbonate to the local building industry, he specified.

The project is one of the multiple pilot OCDR ventures all over the world. Some depend onfetching nutrient-rich deep-sea water to the surface to stimulate the growth of seaweed, while others aim at reducing ocean acidification levels and boosting CO2 uptake.

Some specialists warn that the probable environmental impact of the technologies is unknown. On Tuesday, over 200 scientists mentioned in an open letter that the OCDR research must be prioritized not only to improve the potential but also to head off probable risks.

Sir David King, the head of the Climate Crisis Advisory Group and one of the letter's signatories, mentioned that he favoured nature - based techniques, and was also sceptical regarding the efficacy of highly energy-intensive OCDR tech like the Equatic venture, that is going to cost a great deal to pump water in/out of the plant.

But several billions of tons of CO2 have to be eradicated from the atmosphere, and higher investments in OCDR research was the need of the hour, he said.

What is required today is to reduce the experimental timeline, and that seeks higher funding, he said.

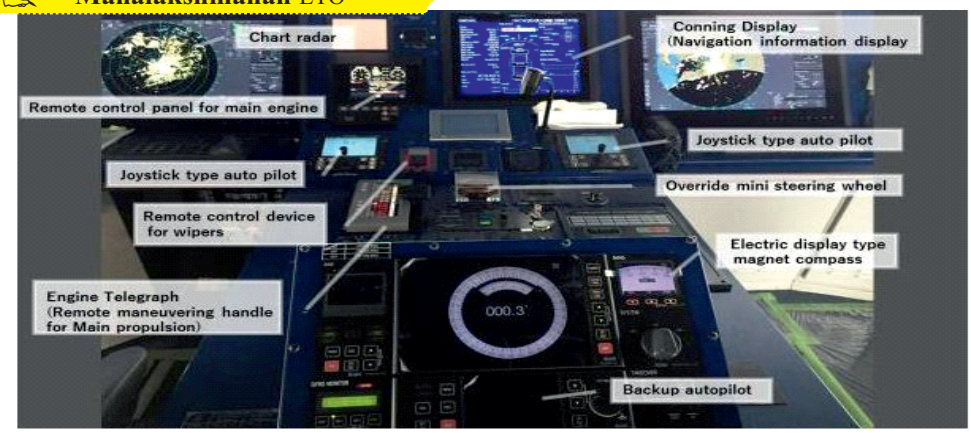
If one came up with a few billion dollars, he added that he believes they would accelerate the programs to the level needed.

Courtesy : Marine insight

"Advancements in Marine Technology: Navigating the Future Seas"

Mahalakshmanan-ETO

In the ever-evolving world of marine technology, innovation and ingenuity have become the driving forces behind safer, more efficient, and environmentally friendly maritime operations. From cutting-edge ship designs to state-of-the-art navigation systems, the marine technical field is at the forefront of shaping the future of seafaring.



Ship Design and Efficiency Modern ship design has come a long way from traditional vessels. Engineers are now focusing on creating ships that are not only faster but also more fuel-efficient. Hull designs are being optimized to reduce drag and enhance stability, resulting in lower fuel consumption and reduced emissions. Innovations like air lubrication systems and advanced propulsion tech nologies are being incorporated to achieve these goals.

Navigation and Safety Safety at sea is paramount, and advanced navigation systems are a cornerstone of maritime technology. The integration of

GPS, radar, and sophisticated sonar systems ensures precise positioning and collision avoidance. In addition, the development of autonomous vessels promises to revolutionize the industry by reducing the risk of human error.

Clean Energy Solutions With growing concerns about environmental impact, marine technology is spearheading the transition to cleaner energy sources. Electric and hybrid propulsion systems, powered by renewable energy such as wind and solar, are being implemented to reduce carbon footprints. Additionally, the use of liquefied natural gas (LNG) as a cleaner alternative to traditional fuels is gaining momentum.

Remote Sensing and Monitoring

Satellite technology and remote sensing play a vital role in monitoring and managing the world's oceans. These tech nologies enable real-time tracking of vessel movements, weather patterns, and even marine life. Such data helps authorities respond to emergencies and supports sustainable fisheries management.

Submersibles and Underwater Robotics The exploration of the deep sea has seen significant progress with the development of advanced submersibles and under water robots. These technologies enable scientists to study the ocean's mysteries, discover new species, and investigate the impacts of climate change on marine ecosystems.

Conclusion

The marine technical field is a dynamic and rapidly evolving sector that is shaping the future of maritime operations. From cleaner and more efficient ships to cutting-edge navigation and monitoring systems, these innovations are not only improving safety but also reducing the environmental footprint of the maritime industry. As we continue to navigate the world's oceans, the innovative spirit of marine technology will undoubtedly lead us toward a more sustainable and prosperous future at sea.

Russia Accuses IMO Of Losing Impartiality Due To External Pressure & Safeguarding Interests Of A Few

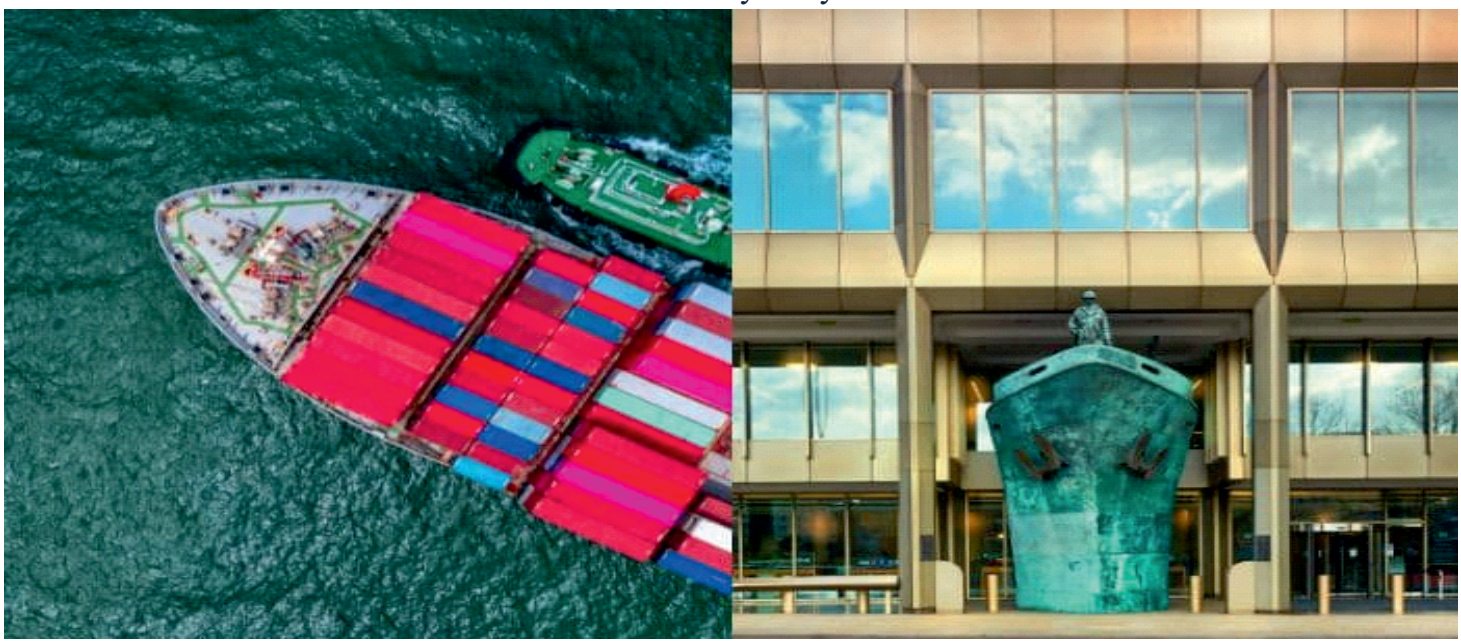
Shikha-GP Rating

Russia has claimed that the U.N. shipping agency is abandoning its impartial role as a result of "external pressure" and is being used in the interests of a minor assortment of beneficiaries.

In December, 40 nations will be chosen by secret ballot to serve on the executive IMO Council that oversees the operation of the body by the IMO Assembly, the agency's highest governing body, which meets every two years.

Due to Moscow's unforgivable invasion that started last year, Ukraine has been advocating to have Russia expelled from the IMO Council.

According to one of



the candidate submissions made to the IMO on 21 September and published on Monday, Russia, an IMO member state since 1958 and a consistent candidate for re-election to the IMO Council, is running for re-election this year.

Russia did not elaborate on how the IMO's role has altered or who it claimed is pressuring the IMO from outside.

The equilibrium within the Organization has been disrupted. That includes the fair treatment of the interests of IMO member states, Russia mentioned, adding that it wished to contribute at challenging times to the IMO's efforts.

An IMO spokesperson stated that the Secretariat does not address submissions or notes made by member nations.

According to the Ukrainian IMO delegation, Russia's evident aggression against Ukraine has led to violations of the principles of international law, including a blockade of the global shipping industry in the Black Sea-Sea of Azov region and "deliberate attacks" against commercial ships, ports, maritime training institutes, navigational facilities, the wider marine environment in Ukraine, as well as impacted seafarers.

The delegation from Ukraine stated that Russia cannot be regarded as one of the responsible members of the international maritime community and should be expelled from the IMO Council.

In July, Russia withdrew from a deal supported by the UN that allowed Ukraine to export its crops. Kyiv has since established its own "humanitarian corridor."

In retaliation for aviation-specific actions taken following its invasion of Ukraine, Moscow was denied enough votes to be re-elected to the UN aviation agency's governing council in October of last year.

Courtesy:Reuters, G Captain

PLACED CADETS DETAILS – 2023

R L Institute of Nautical Sciences takes concerted efforts to get placement opportunities to the meritorious cadets who have passed successfully in B.Tech Marine Engineering, ETO, GME and GP Rating courses. The following is the list of cadets who have been placed in various shipping companies like MSC Crewing Services Pvt. Ltd, Synergy Group, Pacific Manning Agency (PIL), and Eastaway India Pvt.Ltd. The following students have been placed in the current year 2023.

VENKATESH N
ELECTRO TECHNICAL OFFICER (ETO) – FEB 2023 BATCH
MSC CREWING SERVICES PVT. LTD., INDIA

VEDANT CHAUDHARY
(1859608031)
MSC CREWING SERVICES PVT. LTD., INDIA
B.TECH MARINE ENGINEERING – ENGINE CADETS

PRAVEEN SHUKLA
(1859608020)
MSC CREWING SERVICES PVT. LTD., INDIA
B.TECH MARINE ENGINEERING – ENGINE CADETS

SAJINDAS P K
(1959608004)
SYNERGY GROUP
B.TECH MARINE ENGINEERING — ENGINE CADETS 2019-2023 BATCH

FLAVIUS LEANDER C
(1959608002)
SYNERGY GROUP
B.TECH MARINE ENGINEERING — ENGINE CADETS 2019-2023 BATCH

SAM CHRISTOPHER J
(1959608005)
MSC CREWING SERVICES PVT. LTD., INDIA
ENGINE CADETS 2019-2023 BATCH

PANIRUBAN S
(1959608003)
MSC CREWING SERVICES PVT. LTD., INDIA
ENGINE CADETS 2019-2023 BATCH

ANEESH TONY N
(2023FRLE01)
PIL —PACIFIC MANNING AGENCY
ELECTRO TECHNICAL OFFICER (ETO) — FEB 2023 BATCH

BALA GAUTHAM K
(2023FRLE06)
PIL — PACIFIC MANNING AGENCY
ELECTRO TECHNICAL OFFICER (ETO) — FEB 2023 BATCH

NITHEESH M
(2023FRLE09)
PIL — PACIFIC MANNING AGENCY
ELECTRO TECHNICAL OFFICER (ETO) — FEB 2023 BATCH

PARTH RAJESH MAHADIK
(2023FRLE10)
PIL — PACIFIC MANNING AGENCY
ELECTRO TECHNICAL OFFICER (ETO) — FEB 2023 BATCH

Revati Achary .T
G.P.Rating — July -2022
Maersk Line Fleet Management

Soniya S.Agarwal
G.P.Rating — July -2022
Maersk Line Fleet Management

Bhurji Simrath Singh
2022JURLGP03
ACORNSHIP MANAGEMENT Pvt Ltd

Bikesh Chauhan
2022JURLGP04
SHINING STAR MARINE SERVICES Pvt.Ltd.,

VICT PROGRAMME

RL Institute of Nautical Sciences conducted 10 day VICT programme for the mariners who have got experience in the marine field. Eight candidates attended the class. The training session commenced on 11th September and went up to 23rd September, 2023. Our college faculty members were resource persons .At the end of the training session there was an exit test conducted by D.G Shipping, Mumbai. All the students cleared the examination and became eligible for a teaching profession in all the marine institutes.

CAREER AWARNESS PROGRAMME

As part of the promotional activities, Dr.M.Kumarasamy, Vice-Principal and Mr.Chandran Murthi, PRO of RLINS visited many engineering collages and gave power point presentation encompassing on the prospects of maritime education and to bring awareness in the marine field where umpteen number of vacancies arise for the GME, ETO and G.P Rating students every year. These opportunities are unexplored and untrodden by most of the students who often normally choose prominent courses in engineering subjects. The areas are wide open such as shipping, Logistics, and port management which are critical for global trade. These are just a few examples and the marine field continues to evolve with the advancements in technology and growing awareness of the importance of ocean conservation.

Mr.Chandran Murthi, PRO, addressing the students about the opportunities available in the marine field.

Dr. M.Kumarasamy,Vice-Principal , interacting with the students on the availability of job opportunities for the mariners

Dr. R. Kannan, Prof.and Head I/c, Dept. Mechanical Engg, PSNA College of Engg & Tech.,
Addressing the students on the importance of Mechanical Engg in the marine field

VINAYAKA CHATHURTHI CELEBRATION

RL Institute of Nautical Sciences celebrated with piety VINAYAKAR CHATHURTHI celebration on 15TH September (Friday) in the college office at 4pm.Mr.Gnana Edison Raj, Principal took part in it .All the faculty and staff members also participated .Earlier all the deities were decorated with flowers and the Pooja was performed by Mr.Balaji and Mr.Ramasamy. After the Pooja, prasadams were distributed to all the faculty and staff members.

Vinayaka Chathurthi Celebration was held in RLINS office at 4.00 pm on 15th September, 2023(Friday)