



Harit Sagar Samachar

September 2025 | Issue 6

Welcome Note

Welcome to the Sixth Issue of Harit Sagar Samachar.

We are pleased to present the latest edition of **Harit Sagar Samachar**, your go-to source for innovations, updates, and best practices in sustainable maritime operations. This publication is designed to inform, inspire, and connect professionals dedicated to reducing the environmental footprint of ports and shipping activities.

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Green Ports and Shipping: chartering a sustainable maritime future

The maritime sector, a long-standing pillar of global trade and economic growth, is today facing a new and defining challenge of sustainability. As the world confronts climate change, air and water pollution, and the degradation of natural ecosystems, the need for a cleaner and more responsible approach to port operations and shipping has become clear. In this emerging era, the focus is no longer limited to throughput, speed or expansion. The conversation has rightly shifted towards green ports and sustainable shipping, aiming to align maritime development with the broader goals of environmental stewardship.

Both major and minor ports serve as vital engines of commerce. Their role in shaping economic futures is undeniable. But ports are also large energy consumers, emitters of greenhouse gases, and contributors to local air and water pollution. Recognizing this dual impact,

the maritime community across public and private sectors is stepping forward with renewed purpose. A green transformation is not just desirable; it is urgent and inevitable.

Green ports represent a decisive shift from traditional operations to sustainable infrastructure and practices. They integrate cleaner energy sources, eco-friendly equipment, and waste management strategies that minimize harm to the environment. The transition begins with energy. Ports are increasingly adopting renewable energy systems such as solar panels and wind turbines to power their operations. These clean energy sources are gradually replacing conventional fuels, reducing carbon footprints and setting the foundation for future-ready ports.

Beyond energy, there is also a focus on electrification of cargo handling equipment, introducing shore power

facilities to allow vessels to switch off diesel generators at berth and promoting low-emission vehicles within port areas. These initiatives not only reduce air pollution but also protect the health of communities living around port zones.

Waste management is another crucial component. Progressive ports are now adopting integrated systems for the treatment of ballast water, oily waste and solid garbage. These systems ensure that harmful materials do not reach the sea, preserving marine biodiversity. The creation of green buffers with trees and landscaping around port boundaries also helps improve air quality and reduce noise pollution.

Importantly, these advancements are not limited to large, high-traffic ports. Minor ports, often closer to rural economies and regional markets, are embracing the green agenda



with equal commitment. Through thoughtful planning, innovative technologies and community engagement, they are proving that size is no barrier to sustainability.

While ports are transforming on land, shipping the lifeline of international trade is also evolving. The industry is witnessing a clear movement towards cleaner fuels such as liquefied natural gas (LNG), biofuels, methanol, and hydrogen. These alternatives offer significant reductions in greenhouse gas emissions compared to conventional bunker fuel.

Technological innovation is also driving this transition. Modern vessels now feature energy-efficient designs, including advanced hull coatings, propeller upgrades, and air lubrication systems that reduce drag. In parallel, digital route optimization tools enable ships to choose the most fuel-efficient paths, cutting travel time and emissions.

Operational strategies such as slow steaming where ships travel at reduced speeds are also proving beneficial. These measures not only reduce fuel consumption but also enhance safety and extend the life of ship components. Also, efforts to reduce underwater noise pollution and introduce onboard recycling practices are contributing to the

broader goal of marine conservation.

At the heart of this transition is technology. Ports are becoming smarter with the adoption of real-time monitoring systems, artificial intelligence, and automation. These tools help optimize cargo movement, reduce idling time, and support data-driven environmental decision-making. Smart logistics and predictive maintenance ensure that every element of port and ship operation is efficient and environmentally sound.

However, this transition demands more than just technological investment. It requires collaboration and long-term commitment across governments, academia, industries, and civil society. Policymakers must provide clear frameworks and incentives to promote sustainable practices. Research and training institutions must equip the next generation of maritime professionals with the knowledge and skills to lead this transformation. The private sector, too, has a significant role to play through innovation and responsible business practices.

Environmental sustainability is not a destination but a journey that requires vision, discipline, and collective will. The maritime sector, given its global nature, has the

opportunity to set powerful examples. Every green initiative, every reduction in emissions, every step towards cleaner oceans contributes to a larger global effort that will define the future of humanity's relationship with nature.

In the context of national development, building green ports and promoting sustainable shipping are integral to achieving a blue economy where ocean resources are used responsibly for economic growth, improved livelihoods, and ecosystem health. The green transition strengthens port resilience, reduces environmental risks, and ensures long-term competitiveness. As the world moves towards decarbonization and ecological balance, the maritime sector must be at the forefront of action. A future where ports and ships operate in harmony with nature is not just hope, it is a responsibility that must be fulfilled. The choices made today will shape the maritime landscape for decades to come.

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Green Initiatives

National Initiatives

India aims to capture 5% of the global shipbuilding market by 2030 under the Maritime Amrit Kaal Vision 2047. The initiative focuses on developing world-class shipyards, promoting green shipping practices, and establishing a national container line to boost exports and reduce dependence on foreign carriers. [Read More](#)

Mormugao Port has been declared India's first accredited "Green Port" by the Centre of Excellence on ESG and Circularity, Mumbai. This recognition is based on the port's proactive sustainability measures and technological advancements. Among its key initiatives are the provision of incentives to vessels with high Environmental Ship Index (ESI) scores, the operation of a 3MW solar power plant to promote renewable energy, and its selection by the World Bank for the Greening Ports Project. Additionally, the port has implemented cutting-

edge technologies such as 5G connectivity and an indigenous vessel traffic management system, further reinforcing its commitment to environmental responsibility and operational efficiency. [Read more...](#)

India has commissioned a 1-MW green hydrogen power plant at Kandla Port, marking a step forward in the country's push towards cleaner maritime infrastructure. [Read more...](#)

The Indian Ports Act, 2025, passed by the Lok Sabha, replaces the 1908 law, creates Maritime State Development Councils and State Maritime Boards, enforces MARPOL and ballast water compliance, and promotes integrated planning with Centre-State cooperation. [Read more...](#)

As part of its initiative to boost maritime infrastructure, the Government of Andhra Pradesh, through the Andhra Pradesh Maritime Board (APMB), has signed a Memorandum of

Understanding (MoU) with APM Terminals, a Netherlands-based operator under AP Moller-Maersk, to accelerate port and terminal development in the state. [Read more...](#)

Under the Cruise Bharat Mission, The Ministry of Ports, Shipping and Waterways (MoPSW) announced two luxury cruise ships worth ₹250 crore for the Brahmaputra by 2027 (12 in total planned), along with 100 river cruise terminals, 10 sea cruise terminals, and five marinas to boost tourism and river circuits in the Northeast. [Read more...](#)

Cochin Shipyard Limited and Mazagon Dock Shipbuilders Limited are currently building one ship each, powered entirely by hydrogen fuel cells developed using indigenous technology, Union Minister for Ports and Shipping, Shri Sarbananda Sonowal tells Lok Sabha. [Read more...](#)



International Initiatives

Antigua and Barbuda's government and the Bahamas-based maritime startup Veer have signed a memorandum of understanding (MOU) to turn the region into a clean shipping hub. [Read more...](#)

The UK government has announced a £30m (\$40.6m) funding initiative aimed at decarbonizing the shipping industry and stimulating local economies. This funding, which is part of the sixth round of the Clean Maritime Demonstration Competition (CMDC), has been unveiled by the UK Maritime Minister Mike Kane during a visit to Clydeport in Glasgow. [Read more...](#)

Azra Tech, a pioneer in sustainable marine technologies, announces a strategic collaboration with Neptune Lines Shipping and Managing Enterprises SA, a leading short-sea car carrier operator in Europe and the Mediterranean, to support innovation in eco-friendly vessel performance. [Read more...](#)

The first agreement was signed with Japan's ITOCHU Corporation and Orascom Construction to jointly design, develop, and operate integrated facilities for supplying ships with ammonia as a marine fuel (bunker fuel) at the SCZONE ports of Sokhna and East Port Said. This agreement will contribute to reducing emissions and supporting the Zone's transition towards sustainable energy in maritime transport, according

to SCZONE press release. [Read more...](#)

The European Commission has approved a €645 million grant for the development of a renewable energy cluster near Bornholm in the Baltic Sea. This project will connect a 3-gigawatt offshore wind farm to both Danish and German energy grids, providing significant power to both countries. [Read more...](#)

Government announces £448 million at London International Shipping Week to slash emissions from shipping, cementing the UK as a clean energy superpower and breaking down barriers to opportunity in coastal communities. [Read more...](#)



News Highlights

Shri Sarbananda Sonowal Unveils Green Hydrogen Pilot Project at VOC Port in Tamil Nadu

September 05, 2025 | Source: Press Information Bureau

India's Union Minister of Ports, Shipping and Waterways (MoPSW) Shri Sarbananda Sonowal inaugurated India's first port-based Green Hydrogen Pilot Project at V.O. Chidambaranar (VOC) Port, marking a significant step in

the country's clean energy transition. The 10 Nm³/hr pilot facility will generate green hydrogen to power streetlights and an electric vehicle charging station in the port colony. [Read more...](#)

Syama Prasad Mookerjee Port Sees 16% Cargo Growth

September 03, 2025, Times of India

Syama Prasad Mookerjee Port, Kolkata, recorded a 16% rise in cargo handling between April-

August 2025 compared to the previous year, reflecting strong growth in eastern maritime trade. [Read more...](#)

The World's First Complete Commercial Ammonia Fuelled Engine Has Been Accomplished

September 1, 2025 | Source: Japan Engine Corporation

Japan Engine Corporation (J-ENG) accomplished the first fully-functional full-scale commercial engine 7UEC50LSJA-HPSCR (50 cm bore, 7 cylinders, with High Press. SCR), which has been developed as a part of "Next-Generation Ship Development" of Green Innovation Fund



Project administered by NEDO.
[Read more...](#)

Vizhinjam Port Exceeds First-Year Container Handling Targets

August 28, 2025, Times of India

Vizhinjam Port surpassed expectations in its first year by handling ~10.12 lakh containers—exceeding both its installed capacity and projected targets. [Read more...](#)

MoPSW Launches MAR-a-THON 2025 at IIT Madras to Foster Maritime Innovation

August 25, 2025 | Source: PIB

The Ministry of Ports, Shipping and Waterways (MoPSW), in collaboration with the National Technology Centre for Ports, Waterways & Coasts (NTCPWC), IIT Madras, the National Maritime Complex (NMC), and Chennai Port Authority (ChPA), launched MAR-a-THON 2025 – India's Maritime Hackathon at IIT Madras. [Read more...](#)

Shipping Ministry to Explore Dedicated Satellite Technology for the Indian Maritime Sector: Sarbananda Sonowal

August 24, 2025 | Source: Maritime Gateway

The Union Minister, Shri Sarbananda Sonowal said the Ministry will explore the possibility of launching a dedicated satellite or acquiring a transponder to

strengthen India's maritime governance and port management infrastructure. The proposed system would provide exclusive coverage for Indian coastal waters, inland waterways and port regions, integrating with national maritime databases to offer real-time monitoring of vessel traffic, navigational safety and port operations. [Read more...](#)

V O C Port sets record with export of 101 windmill blades in a ship

August 22, 2025, The Hindu

V O Chidambaranar Port in Thoothukudi set a new record by exporting 101 windmill blades in a single shipment aboard MV BBC Santiago. This surpassed its previous record of 75 blades. The operation highlights the port's growing role in supporting India's renewable energy exports. [Read more...](#)

Germany has its First Green Ship Recycling Facility

August 21, 2025 | Source: Offshore Energy

Germany has established its first green ship recycling facility. The facility, operated by EWD Benli Recycling in Emden, has received official approval to handle the recycling of various vessels, offshore wind turbines, and industrial plants. The permit covers the entire process, including the safe removal of

hazardous materials.
[Read more...](#)

UK Funds Project to Combine Carbon and Emission Capture in Southampton

August 20, 2025 | Source: The Maritime Executive

The UK is supporting the next step in emission capture systems that can be deployed in ports as a cost-effective means of reducing emissions. The new project will combine the emissions capture capabilities of STAX Engineering with the carbon capture technology of Seabound. The new project will be the first opportunity to integrate the two technologies and deploy them at the Port of Southampton. [Read more...](#)

BSM launches methanol bunkering simulator in Kochi, India

August 4, 2025, Ship Technology

Bernhard Schulte Shipmanagement (BSM) has opened a methanol bunkering simulator at the Maritime Training Centre in Kochi, India, in collaboration with Wartsila. This simulator aims to provide seafarers with the necessary skills and knowledge to safely manage methanol as a fuel source. An ammonia bunkering simulation module is set to be added in early 2026. [Read more...](#)



Green Corner

1. IMO's Proposed Net-Zero Framework for Shipping

Significance

If adopted, this will create the first enforceable global decarbonization standard for any industry, signalling a historic shift towards clean energy in maritime transport.

Scope

Applies to vessels $\geq 5,000$ GT, covering 85% of sector emissions.

Timeline

Adoption in October 2025 → Enforcement from 2028.

Targets (vs 2008 baseline)

GHG intensity cut: 8% cut by 2030; 30% by 2035; 65% by 2040

How It Works

- Reduce GHG intensity or pay fees:
 - » High Emitters: \$378/tonne CO₂e
 - » Compliant Ships: \$100/tonne CO₂e
 - » Top Performers: Avoid fees + earn allowances
- Promotes clean fuels (green ammonia, hydrogen, bio-methanol) and efficiency measures (e.g., wind-assist sails).

Additional Features

- Net-Zero Fund for research & just transition in Global South.
- Full life-cycle (well-to-wake) emissions accounting.

[Read more...](#)

2. VOC Port Showcases Growth in LPG

V O Chidambaranar Port (VOC) has registered significant growth in LPG handling. In the current financial year 2025–26, the Port has handled 1,33,520 tonnes of LPG up to July, marking a growth of 40.01% compared to the 95,364 tonnes handled during the same period of the previous financial year 2024–25.

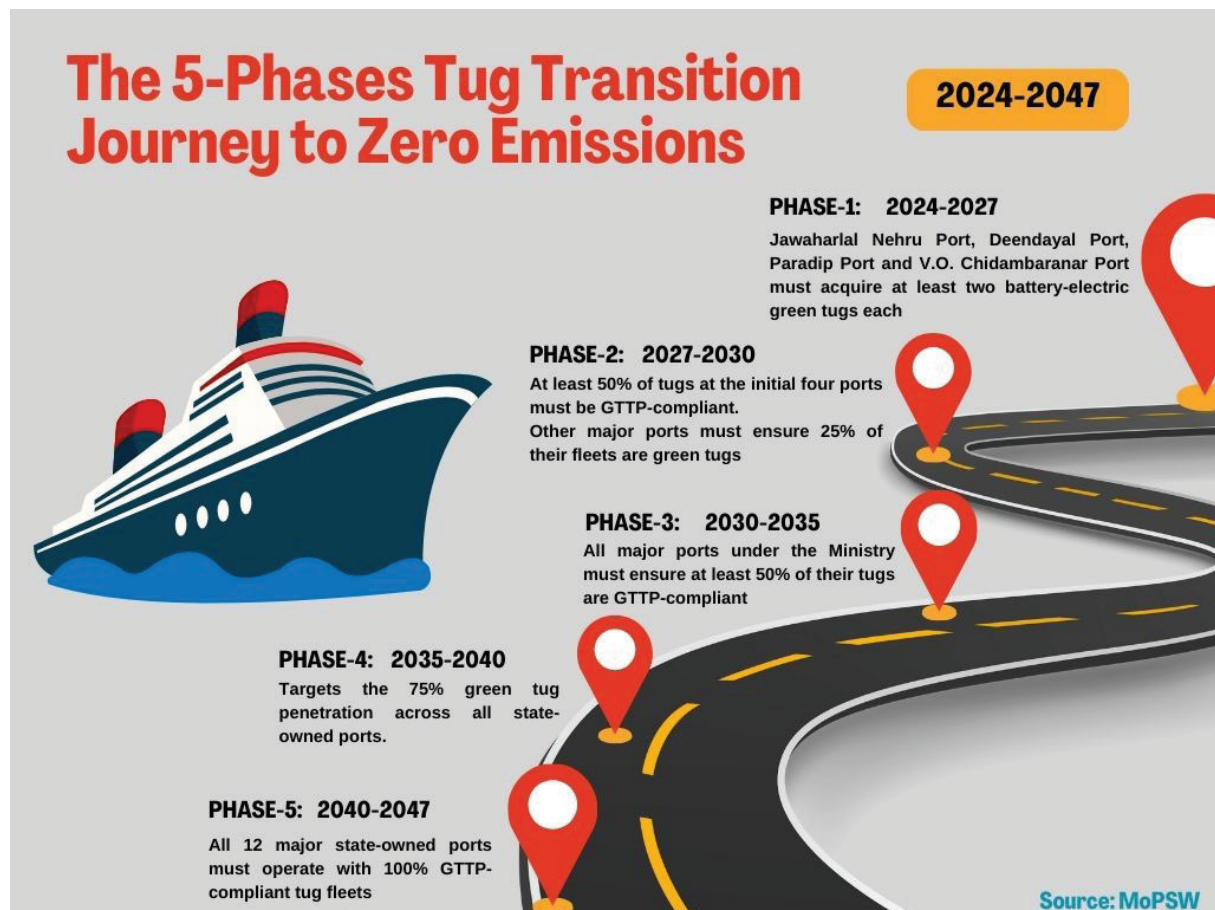
All LPG operations are being efficiently carried out at the Oil Jetty, which is equipped with a berth having a quay length of 150 metres and a draft of 13 metres, capable of handling vessels with a Length Overall (LOA) ranging from 150 to 230 metres. At present, the Oil Jetty can accommodate vessels up to 40,000 DWT.

Alongside LPG, Port has also recorded a steady increase in overall liquid cargo handling. Volumes have steadily risen from 15.24 lakh metric tonnes in 2022–23, to 16.29 lakh metric tonnes in 2023–24, and further to 18.79 lakh metric tonnes in 2024–25. Cargo operations are undertaken through VOC Berths 1 to 7, 10, 17, and the Coastal Berth. [Read more...](#)



Green Tug Transition Programme (GTTP) – Overview

The Ministry of Ports, Shipping and Waterways has launched the Green Tug Transition Programme (GTTP) to decarbonize India's major ports by replacing conventional tugboats with green, low-emission alternatives. The programme sets a five-phase timeline ending in 2047, aligning with India's broader net-zero goals. [Source: MoPSW, 2024](#)





Upcoming Events

15th Annual Capital Link Operational Excellence in Shipping Forum

September 30, 2025,

Divani Caravel Hotel in Athens, Greece [Read more...](#)

SEAFUTURE 2025

September 29–October 2, 2025

La Spezia Naval Base, Italy [Read more...](#)

Marine Insight Summit 2025

September 23–24, 2025

Online [Read more...](#)

India Maritime Week (IMW), 2025

October 27–31, 2025

Bombay Exhibition Center, Goregaon, Mumbai, India [Read more...](#)

Offshore Energy Exhibition & Conference (OEEC) 2025

November 25–26, 2025

RAI Amsterdam Europaplein 24, Amsterdam, 1078 GZ Netherlands [Read more...](#)

Maritime Policies & Guidelines

International Convention on the Control of Harmful Anti-fouling Systems on Ships

The International Convention on the Control of Harmful Anti-fouling Systems on Ships (AFS Convention), adopted on October 5, 2001 and enforced on September 17, 2008, bans harmful organotin compounds, such as TBT, in anti-fouling paints to protect marine ecosystems. These paints prevent biofouling but leach toxins, harming sea life and entering food chains. The Convention applies globally, requiring Parties to prohibit or restrict harmful systems and enforce compliance. [Read more...](#)

The STCW-F Convention and STCW-F Code, 2025

It sets international standards for training, certification, and watch keeping of fishing vessel personnel. Coming into force on January 1, 2026, this updated edition introduces crucial amendments to enhance safety and competency at sea. It offers comprehensive guidance on new protocols, ensuring compliance, improved crew performance, and promoting a safer, more sustainable fishing industry. [Read more...](#)



DID YOU KNOW?

Methanol is a liquid fuel that does not require cooling or pressurization, making it easier to store and transport. [Read more...](#)



Latest Announcements

- **India Maritime Week (October 27–31, 2025) – Mumbai**

Prime Minister Narendra Modi will deliver the keynote address at the Global Maritime CEO Forum during India Maritime Week, scheduled in Mumbai from October 27–31, 2025

The event is expected to showcase investments nearing ₹1 trillion, covering green shipping logistics, shipbuilding, eco-friendly community development, and port-led connectivity. [Read more...](#)



- **India Unveils \$1 Trillion Maritime Investment Roadmap**

Union Minister Sarbananda Sonowal announced a comprehensive \$1 trillion investment roadmap to transform India's maritime sector. The plan focuses on developing green hydrogen hubs, multimodal logistics, shipbuilding, and sustainable shipping, aligning with the Maritime India Vision 2030 and Amrit Kaal Vision 2047. The initiative aims to position India as a global maritime leader and attract international partnerships. [Read more](#)

- **Dedicated Satellite Technology for Maritime Sector**

The MoPSW is exploring the launch of a dedicated satellite or acquisition of a maritime transponder to boost surveillance, communications, navigational support, and port management. [Read more...](#)

- **Cruise Bharat Mission & River Tourism Expansion**

Under the Cruise Bharat Mission, the MoPSW has plans to develop:

100 river cruise terminals, 10 sea cruise terminals, and 5 marinas. With a target to double passenger numbers by 2029. [Read more...](#)

Visit the NCoEGPS Portal at <https://green-port-shipping.org> to explore resources on green ports and sustainable shipping. You can also access back issues of Harit Sagar Samachar directly at <https://green-port-shipping.org/NCoEGPSPublication>



Call for Contributions

Be a participant in the Next Issue of

Harit Sagar Samachar

Send in your:

- Short articles • Case studies • Opinions
- Photos & infographics

On themes such as Port decarbonization strategies; Green shipping corridors; Alternative fuels (LNG, hydrogen, etc.); Digital tools for sustainability; and Gender leadership in green shipping

Submit by: September 30, 2025

Send to: ncoegps@green-port-shipping.org/reetas@teri.res.in

Together Towards a Greener Future

For feedback and contributions email us at: ncoegps@green-port-shipping.org