



IMOCARES



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EDITOR'S COMMENT

Dear Readers,

We hope that you have had a good start to the year and are as excited about the milestones that 2024 will bring as our team is at IMO CARES (Coordinated Actions to Reduce Emissions from Shipping). The past year has been a whirlwind of activity for the project, bringing us closer to our goal of helping Small Island Developing States (SIDS) and Least Developed Countries (LDCs) progress towards our shared global goals of reducing greenhouse gas (GHG) emissions from shipping and ports. Knowledge transfer is one of the most powerful tools to accelerate greening the maritime activities of LDCs and SIDS, and we are proud to play our part in capacity building in these countries in conjunction with the regional Maritime Technology Cooperation Centres (MTCCs).

We know that collaboration is key and through the CARES Connect event, which was held in London in September 2023, we were able to bring together donor countries, recipient countries and technology providers to discuss closer collaboration. We were thrilled by the active participation and hope that the insights from the day fuel future action by decarbonisation stakeholders across the globe.

I am pleased to say that our technology-agnostic Maritime Technology Global Challenge to lower the GHG emissions in the African and Caribbean regions has received a number of submissions since it opened for entries in November 2023. The results of the challenge, as well as regular updates, will be announced shortly on our dedicated IMO CARES website and also on our LinkedIn page, so I would

encourage you to follow us on social media and check in to the site regularly.

We have also included a short preview about our IMO CARES Report on Decarbonisation of Domestic Shipping, which will focus on existing maritime technologies in our two chosen regions, current challenges that need to be addressed and the market-ready solutions that could meet these needs. I hope that our readers will benefit from the insight and information that this report will deliver.

In this newsletter, Lydia Ngugi, Head of MTCC Africa and Vivian Rambarath-Parasram, Head of MTCC Caribbean have both eloquently outlined the impact that the IMO CARES project and the Challenge will have on the countries in their care – and the wider implications for the region. You can also take a deep dive into the details of the specific ports and vessels that these proposed technologies will be implemented across.

The progress we have made would not have been possible without the support of our sponsors – The Kingdom of Saudi Arabia – the teams at the MTCCs and at the IMO itself. My team (consisting of Petra Ghassemi Ahari and Krishan Sivaneson) and I, are extremely grateful for the hard work and support of everyone who has contributed to the journey we have made over the past year – and for the progress that we will collectively achieve in the coming year.

Together, we can create a cleaner, more sustainable future for our oceans and our planet.

Onwards and upwards

**The Editor,
Anton**





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PROJECT OVERVIEW

IMO CARES: Bridging the decarbonisation gap

The IMO CARES (Coordinated Actions to Reduce Emissions from Shipping) project was launched in 2023 with the aim of helping Small Island Developing States (SIDS) and Least Developed Countries (LDCs) to meet the IMO Energy Efficiency and IMO GHG Strategy targets and thus help drive the achievement of global GHG emissions reduction. The project, which is funded by the Kingdom of Saudi Arabia, focuses on identifying suitable market-ready technology solutions that will improve efficiency of vessels/ports and reduce operational costs and GHG emissions.

Decarbonising shipping, which accounts for approximately 3% of global GHG emissions and continues to grow annually, is a global responsibility that requires action from all stakeholders. Meeting the revised IMO GHG Strategy will only be possible if all countries have access to information, technologies, policy support and resources. IMO CARES aims to bridge the technology gap between developed countries and those with fewer resources by enabling the implementation of maritime market-ready technology solutions for ports and domestic vessels in developing countries.

Although the IMO has a number of projects supporting a global maritime transition to a low carbon future, IMO CARES is unique in that it is focused on immediate emission reduction for LDCs and SIDS and is implemented through Maritime Technology Coordination Centres regionally. This complements the work of other IMO GHG-focused projects such as:

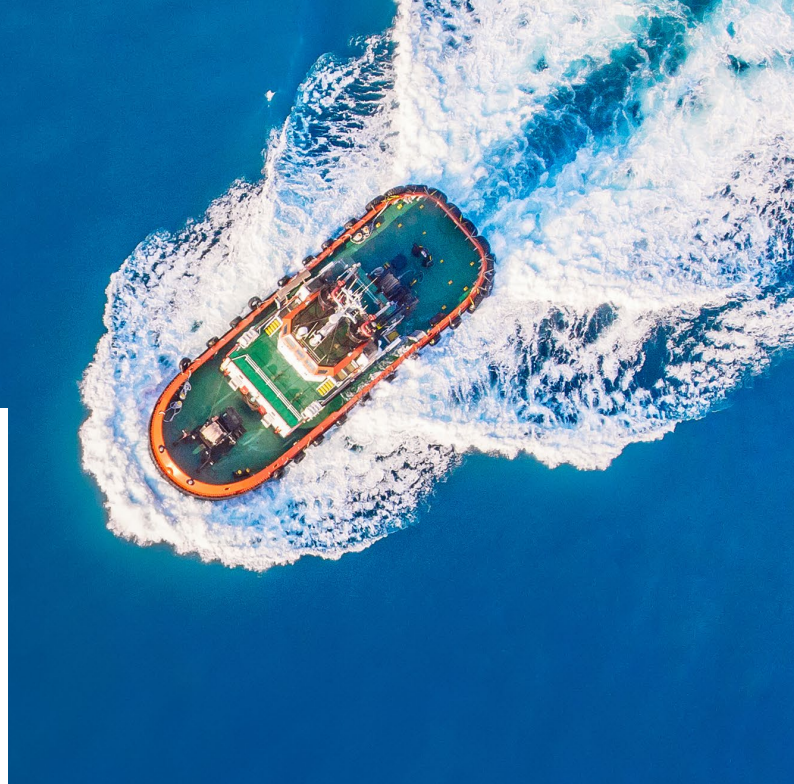
- Green Voyage 2050, which targets more advanced developing countries with a focus

on policy support – including national action plans, knowledge sharing and technology demonstrations.

- GHG Smart, which focuses on building human capacity in LDCs and SIDS.
- NextGEN, which brings together industry, academia and global research centres to offer inclusive solutions for maritime decarbonisation for trials along shipping routes.
- The IMO-UNEP-Norway Innovation Forum that aims to showcase the demonstration of green technologies and their deployment globally in a manner that facilitates blue economic growth in developing regions.
- The Global Maritime Network (GMN) Phase II project, which focuses on facilitating the introduction of portside energy efficiency measures and technologies, and the retrofitting of domestic vessels (under 5,000 GT).

IMO CARES is focused on making decarbonisation technology accessible to LDCs and SIDS and achieves its goals through three prongs: the Maritime Technology Global Challenge, stakeholder interactions via our CARES Connects events and a Report on Decarbonisation of Domestic Shipping (you can read more about these later in this newsletter).

IMO CARES will host an in-person event in June 2024 which will mark the end of the current project. Details about this event will be made publicly available on the IMO CARES website and on our social media.



IMO CARES CONNECTS EVENT OVERVIEW

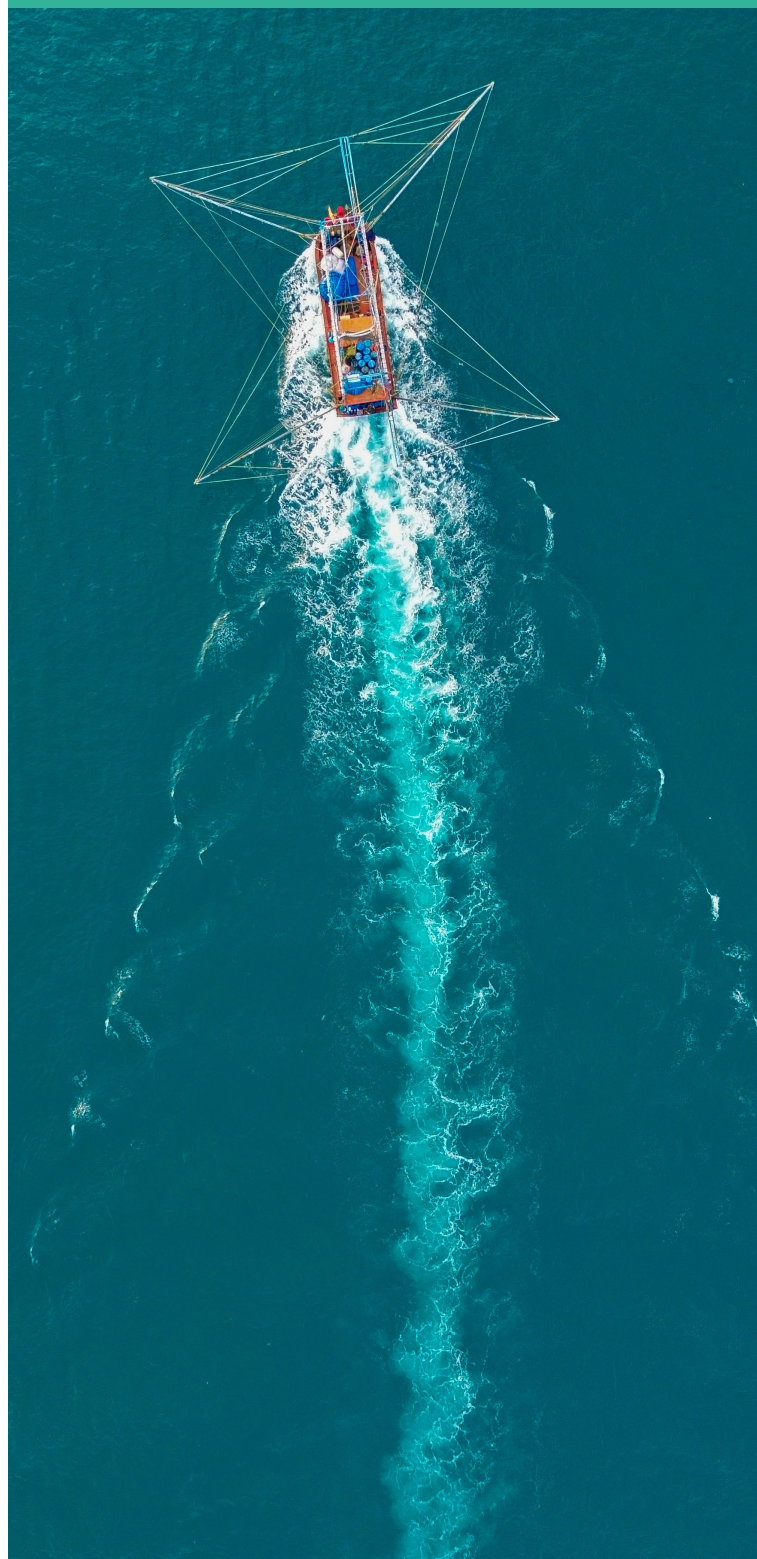
Fostering meaningful dialogue and collaboration for maritime decarbonisation

One of the IMO CARES core functions is to directly link technology companies with potential donors and recipient countries in the specific regions via networking events that encourage knowledge sharing, so that LDCs and SIDS can allocate resources, as well craft policies to support domestic decarbonisation strategies.

In September 2023, the project held a special networking event in London. Titled 'CARES Connects', the event served as an important platform to foster meaningful dialogue among diverse stakeholders, including representatives from donor countries, beneficiary countries, and technology providers. Approximately 50 invitees participated in group discussions, with individuals moving between groups to encourage networking. At the end of the event, the findings from each of the discussions were shared openly and participants were encouraged to continue discussions at their leisure. The event provided valuable insights and potential collaborations that hold promise for future decarbonisation initiatives.

"At its core, CARE Connects is a catalyst for collaboration. By connecting diverse stakeholders across the industry, we unlock the collective power of innovation, knowledge and shared commitment to achieve the targets set out in the revised GHG strategy," explained Anton Rhodes, Project Manager, IMO Cares. "No single nation or entity holds all the answers to maritime decarbonisation, but collaboration holds the key to unlocking the solutions," he added further.

A highlight of the discussion was the importance of education and awareness-building on the urgency of adopting new technologies and sustainable practices to ensure that the environment and the maritime industry as a whole, can be sustained in the future. Bridging the gap between the global north and south, especially in the target regions is essential for the successful implementation of sustainable maritime solutions. The availability of necessary information and insights was deemed crucial to making important decisions. The event's report can be accessed on the 'CARES Connects' news item on the IMO CARES website. A link to the news item can be found [here](#).





IMO CARES MARITIME TECHNOLOGY GLOBAL CHALLENGE OVERVIEW

Challenging the decarbonisation gap

The task of bringing relevant market-ready technologies to SIDS and LDCs in Africa and the Caribbean is being spearheaded by the IMO CARES Maritime Technology Global Challenge. The challenge was launched in November 2023 and invited companies and organisations worldwide to enter their existing decarbonisation technology solutions suitable for use in ports and / or on ships of under 5,000 gt (such as inter-island vessels, port service vessels, and fishing vessels) into the competition.

The solutions submitted are assessed against the needs of four countries that have been chosen through an open selection process. The countries are split across two regions: Namibia and Mauritius in Africa; and St Kitts and Nevis, as well as Trinidad and Tobago in the Caribbean. The competition was technology agnostic and entrants were encouraged to tailor their entries to the specific needs of the countries where the solutions will be deployed.

“The IMO CARES Maritime Technology Global Challenge will ensure that domestic shipping and ports in the four target countries will receive technical proposals for mature green technologies that address their specific needs – and can be applied to other countries in the region that are facing similar issues,” comments Anton Rhodes, Project Manager, IMO CARES. “This challenge will bolster the adoption of green technologies in both regions and support a just and equitable maritime transition. Technology application is a vital part of

the global maritime decarbonisation transition and will help to ensure that every country is empowered to move towards a low carbon future.”

Entries to the competition, which were submitted via the official IMO CARES website, closed on 7th January and the winners will be announced in April 2024. Up to four winning technology providers will receive funding of USD \$15,000 to \$30,000 to develop bespoke technical proposals for the implementation of their solutions in the specific countries. The final proposals are expected to be submitted to the IMO CARES team by June 2024.

The IMO CARES team worked hard to raise awareness of the challenge to ensure that entrants had sufficient information about the competition and the needs of the target countries. An online event was held in July 2023 ahead of the launch of the Challenge and saw active participation from a number of stakeholders including academics, MTCC Africa and the Caribbean, technology providers and other interested parties.

“We had an excellent response, with almost 200 people attending the virtual event. Technology providers actively engaged in discussions highlighting the range of solutions available in today’s market,” said Petra Ghassemi Ahari, IMO CARES Project Analyst.

Additional funds will likely be available at a later stage for the demonstration of the winning technologies in each participating country, under the Global MTCC Network (GMN II) project, which is funded by the European Union.

REPORT ON DECARBONISATION OF DOMESTIC SHIPPING



In focus: IMO CARES Report on Decarbonisation of Domestic Shipping

Domestic shipping, often situated near coastal areas, exerts a significant impact on local populations, making it imperative to take every possible action to reduce GHG emissions. The IMO CARES Report on Decarbonisation of Domestic Shipping aims to accelerate the pace of greening domestic shipping operations in LDCs and SIDS by identifying current optimal operational practices and green technologies, and exploring their potential implementation in Africa and the Caribbean.

The report will provide an overview of the types of vessels commonly operating in the domestic sectors of LDCs and SIDS in Africa and the Caribbean (some general information is included in port and vessel regional focus sections of this newsletter) and examine the interaction between the domestic shipping sector and emissions. It will contain insights about the challenges and opportunities for decarbonising domestic shipping and ports in developing countries, including capacity building, financing, regulations, and policy development. All of this information will facilitate capacity building, knowledge sharing and optimised investments in GHG reduction solutions.

By providing a comprehensive overview of available technologies to improve efficiency and reduce GHG emissions, including wind, solar and battery technologies, vessel performance enhancements, as well as alternative fuels, the report will support readers in making informed decisions when allocating resources to projects to achieve maximum benefits. They will also be more easily able to identify technologies that are compatible with each other and can be combined to achieve enhanced results.

The report will showcase several case studies outlining the current use of energy-efficient technologies and their long-term impact and benefits and provide recommendations to expedite technology adoption and integrate energy efficient solutions to facilitate the decarbonisation of domestic shipping in LDCs and SIDS.

The IMO CARES Report on 'Decarbonisation of Domestic Shipping' will be released in June 2024 on the IMO CARES website and is intended for a diverse audience of maritime stakeholders, including ship owners, operations, port managers, regulatory bodies, policymakers, technology providers, investors and donors.



REGIONAL FOCUS: AFRICA

Fostering greener solutions on the African subcontinent

The IMO CARES project has the potential to play a notable role in influencing decarbonisation efforts within domestic shipping across the African subcontinent. Lydia Ngugi, Head of the Maritime Technology Cooperation Centre for Africa (MTCC Africa) and one of the members of the Maritime Technology Global Challenge judging panel, says that this project will help reshape the region's approach towards maritime decarbonisation, mitigation, and adaptation in line with the revised IMO GHG Strategy. She observes that the IMO CARES Challenge “will act as a catalyst that will propel the global north-south cooperation”, adding that the overall project is a bridge to the capacity-building gap in developing nations.

In the African region, the Challenge sought technical proposals to meet the needs of ports and vessels in Namibia and Mauritius (see details below). Ms. Ngugi points out that the judges were looking for solutions that ensure the region will have a competitive edge and sustainable development balance, “that promotes upscaling towards internationally acclaimed green port operations.”

She states that the technology-agnostic nature of the programme is ideal for leveraging on the fact that the region could benefit from a plethora of solutions under the IMO CARES Global Challenge. She explains, “As an example, ports in the region can advocate for the use of solar energy, electric cranes powered by green energy etc. Pilot boats can have shore power

plugs and use of alternative fuels. The Africa region has a considerable number of government-owned commercial ports as well as domestic fleet, i.e. pilot boats, ferries, tugboats, barges etc.”

“Essentially this global challenge aims to aid the identification and demonstration of market-ready technology solutions that will support demonstration pilot projects from the Africa region. In so doing, this will play a strategic role in ensuring that no one is left behind towards a just maritime shipping transition,” the MTCC Africa head says. “The majority of port cities in Africa have tropical weather that enhances the ability to enjoy favourable working conditions at the commercial ports. This has been a notable advantage that can additionally be supplemented further by having energy-efficient infrastructure measures that support decarbonisation.”

She says that the transfer of knowledge and technology is intertwined with the aspect of cooperation and collaboration and comments that “The overarching ‘blue economy’ agenda is best implemented with the exchange of best practices for the Africa region. From a maritime shipping decarbonisation angle, transfer of knowledge and technology in relation to port infrastructure enables the implementation of energy efficient technologies that also foster regional capacity building on decarbonisation in the regions of the developing countries.”





AFRICAN PORT FOCUS

Greening ports in Africa

In Africa, the IMO CARES project is focused on the needs of vessels and ports in Namibia and Mauritius. There are already a number of efforts underway in both countries.

In Namibia, the Namports Authority is in charge of the ports of Walvis Bay and Lüderitz, and has identified a number of emission reduction measures including the installation of LED lights across port operations, and the use of alternative (dual-fuel) fuel sources for two new tugboats (planned for acquisition in the next 2 years). The authorities are also seeking to conduct a feasibility study for use of alternative energy sources including solar energy installations and onshore power access.

Founded in 1973, the Port of Walvis Bay, recently constructed a new container terminal and tanker jetty, giving it 13 berths to cater to dry, liquid and break-bulk vessels, RoRo and passenger ships, and dry and refrigerated containers. It exports a mix of products including salt, charcoal, fish, fish products, copper and lead and concentrates, petroleum, vehicles, wheat, chemicals, as well as project cargo. The port is already efficient, with a berth utilisation rate of 94.5% and it has a number of developments planned for the next few years including upgraded facilities for energy and fuel manufacture, storage and distribution and also dry-docking facilities.

The Port of Lüderitz, which was officially inaugurated on May 19, 1910 is located 254 nautical miles south of the Port of Walvis Bay along Namibia's coastline. It serves the mines in the southern regions of Namibia and north-western South Africa with imports and exports of mining commodities. Lüderitz port is known for its exports of manganese ore, zinc, zinc concentrate, ore, ice, lead concentrate and petroleum. It is also an important base for the local fishing industry and exports wet fish and frozen fish. In the coming years, the Port of Lüderitz will see its quay wall extended by 300 metres, as well as additional land secured for port terminal operations. The authorities are seeking to acquire 886 hectares of additional land at Angra Point through private-public partnership to cater for the export of Green



Hydrogen (Green Ammonia) and bulk export of manganese through the port of Lüderitz. Recognising the need for dedicated bulk facilities to cater for the mining and related industry, Namport commissioned a feasibility study as part of its master plan for enhancing responsiveness to its customers.

In Mauritius, the focus of the IMO CARES project will be Port Louis Harbour, which plays a vital role in the national economy by handling about 99% of the total volume of the external trade. It is of strategic importance to the country as food and petroleum products, raw materials for the textile industry, and major exports such as sugar and textile transit through the harbour. The Freeport has been modernised over the past decades, with updated port equipment, a dynamic waterfront and dedicated cruise facility.

The Mauritius Port Authority is keen to find additional means of improving vessel efficiency, reducing the impact of the port on nature and local communities, and ensuring that the port boosts its international reputation.

The IMO CARES Maritime Technology Global Challenge will empower Namport and Mauritius Port authorities with details of technologies that will reduce the environmental footprint of their ports and boost their international reputation. The lessons learned from the technical proposals and eventual installation of the technologies will create a bank of knowledge that will supply the region with information about greening their operations.

REGIONAL FOCUS: THE CARIBBEAN

Capacity building in the Caribbean

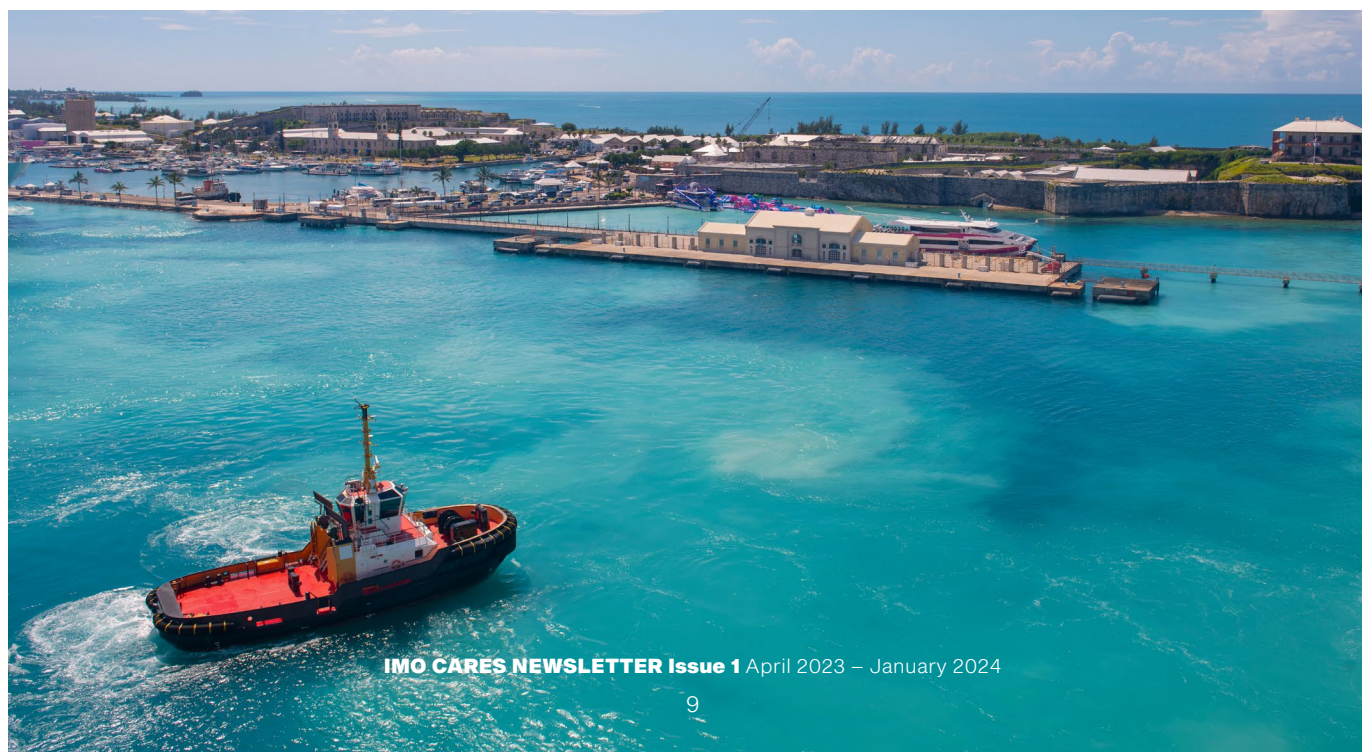
The Caribbean is famed for its natural beauty, with tourism responsible for a considerable amount of the region's income, making it vital that the environmental impact of commercial activities is kept to a minimum. In a maritime context, this would mean reducing emissions from the domestic fleet, as well as finding ways for the local ports to continue to receive calls from cruise ships in a greener fashion. The latter is particularly important as cruise tourism is also responsible for high levels of employment in many of the Caribbean Small Island Developing States (SIDS).

In this region, the IMO CARES project is focused on the decarbonisation needs of St Kitts and Nevis, as well as Trinidad & Tobago. Both sets of islands are renowned tourist destinations and feature on the itineraries of multiple cruise lines. Vivian Rambarath-Parasram, Head of Maritime Technology Cooperation Centre (MTCC) Caribbean – and one of the judges for the Challenge – says that the IMO CARES is an ideal means by which to build research and knowledge capacity in the region. She comments “Most SIDS do not have the research capacity or the funding to undertake fundamental and even applied research, so technology and knowledge transfer is essential

given that most of the research is being undertaken in the developing world.”

“The limited research funds are therefore used to facilitate uptake and implementation of the technology and build out of the relevant capacity to enable successful use of the technology. Projects of this nature are therefore instrumental in enabling compliance with applicable international standards in the developing regions,” she says. “This Global Technology challenge will facilitate the uptake and transfer of technology to target countries, ports and shipping operators in Caribbean SIDS. We anticipate a successful demonstration that can be replicated in other countries, based on the learning from the initial implementation of the chosen technologies.”

As many of the domestic vessels are quite small and often older, Rambarath-Parasram warns that “any proposed technology would need to be very cost effective to make commercial sense to such ship operators”. There is also the need for the new technologies to support the implementation of the Carbon Intensity Indicator (CII) regulations for different ship types, including cruise-ships, which have a high presence in the region.





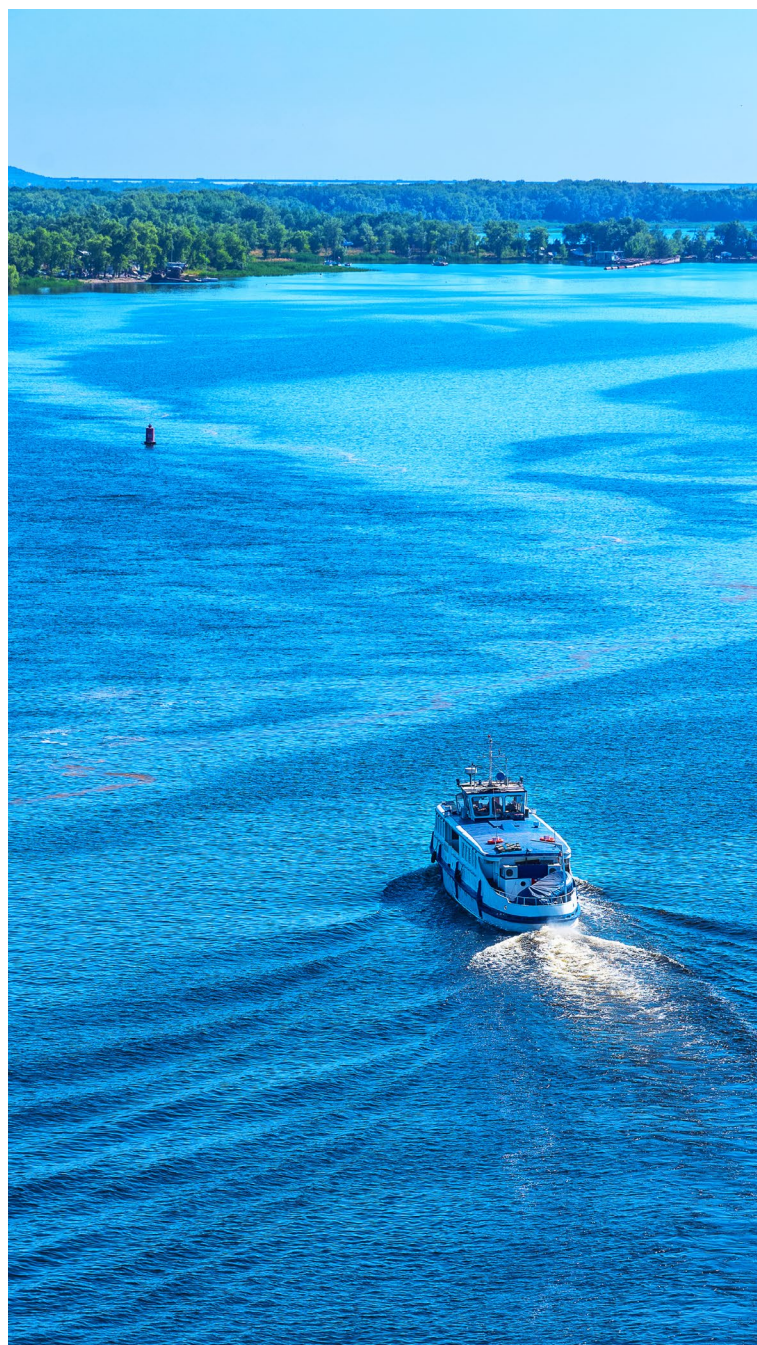
CARIBBEAN PORT FOCUS

Maritime Technology Global Challenge Port focus: Caribbean

In the Caribbean region, the project is particularly focused on the needs of three ports across both sets of islands. The Port of Galeota, located in Trinidad and Tobago, sees calls from 150-200 vessels per month, mostly involved in offshore and energy activities and using the port as a logistics base. In addition to offering oil and gas equipment, the port is active in providing logistics cargo via its five commercial berths. There is an additional berth that is used by the Coast Guard. The port authorities are seeking to secure a Green Port designation for Galeota and are conducting a greenhouse gas (GHG) audit and exploring ways to improve energy efficiency, including renewable energy systems, vessel operations management, alternate energy fueling systems, etc. Several planned developments include a port expansion, LED upgrades, solar and wind-powered applications, etc.

The other port in the same set of islands is Point Lisas, which caters to operators working with multipurpose petrochemicals, iron ore, steel, aggregates, urea, liquid bulks, methanol and more. It has six commercial berths as well as an additional berth for tug mooring. A number of decarbonisation initiatives have been identified as suitable including vessel speed monitoring for reduced emission in port, solar power garbage compactor, a GHG audit for vessel operations, LED lighting and more.

Located in St Kitts & Nevis, the third port under consideration by the judges for the Caribbean region is the Deep-Water Port, operated by St. Christopher Air & Sea Ports Authority. This port, which handles container and break-bulk cargo, is the main point of entry for a significant portion of the islands' cargo, and also caters to cruise vessels. The port authorities are dedicated to advancing sustainability and environmental responsibility and are seeking to facilitate shore power at cruise pier, as well as integrate renewable energy sources such as solar farms, where possible.





VESSEL FOCUS



Spurring the decarbonisation of domestic shipping fleets

Domestic vessels are an important, visible component of both global supply chains and local communities but face particular challenges in reaching decarbonisation and sustainability goals. Often operated by smaller organisations with limited resources, investment in green technologies for domestic vessels can lag behind that seen in the ocean fleet with its larger corporate owners and better access to capital for investment. Operating closer to population centres on land and within marine habitats local communities may rely on for food, the potential positive impact of greener domestic fleets is significant, bringing cleaner air to communities, protecting coastal habitats for marine life, and improving food security.

The potential vessels identified by the regional MTCCs as the focus for the IMO CARES Maritime Technology Global Challenge, demonstrate the diversity of domestic fleets and highlight some of the challenges decarbonisation solutions will face, from the limited deck space of tugboats to the high design speeds of passenger vessels.

The vessels, all of which are under 5,000 gt in size, range from inter-island vessels and port service vessels to fishing vessels and could benefit from a number of technologies including solar, wind,

air lubrication, efficiency optimisation, alternative fuels, paints and coatings, and beyond.

In the Caribbean, three of the short-listed vessels are fixed pitch propeller tugboats of 100-300 gross tonnes (gt) running passenger transport services, another is a 100 gt waterjet-propelled passenger launch, and the final vessel is a 3,830 gt Offshore Supply Vessel (OSV) with waste heat recovery, shore supply connection, and exhaust gas cleaning systems already in place. In Africa, the chosen ship is a 1,421 gt fisheries patrol vessel carrying out inspections of fishing vessels and patrols of coastal waters. The Namibia-flagged fisheries patrol vessel is the oldest potential ship with a build date of 2001/2002, and the youngest potential vessel in the challenge was built in 2014.

All of the proposed vessels use Marine Diesel Oil (MDO) but have daily fuel consumptions from 0.25m³ up to 12.6m³, a reflection of the varied size of the ships, but also of their typical voyage lengths from 6 NM at the shortest up to 510 NM.

Reducing the carbon emissions of domestic fleets is important to reaching the regional and global decarbonisation targets that will prevent climate catastrophe, and comes with myriad other benefits to people and the planet.

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TO SHARING MORE WITH YOU IN OUR NEXT NEWSLETTER!**