

Maritime Technology Global Challenge Launch

WELCOME!

The workshop will start
in a moment



IMOCARES
COORDINATED ACTIONS FOR THE REDUCTION
OF EMISSIONS FROM SHIPS



The IMO CARES Project is funded by the Kingdom of Saudi Arabia and is implemented by IMO

AGENDA

- Welcome remarks
- What is IMO CARES and what is the Global Challenge?
- Introducing the MTCCs and regional challenges
- Next steps and how to get involved
- Q & A
- Closing remarks

Zoom Workshop Etiquette

Remain Muted
Until Required



Limit External
Distractions



Ensure Sufficient
Bandwidth



Utilize the Chat
and Q&A



Be Respectful
Be Courteous



Enjoy the Workshop





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CARES - KEY ACTIVITIES



Networking events



Technology reports



Global challenge

The Maritime Technology Global Challenge

Welcome to the IMO CARES Maritime Technology Global Challenge! We will be opening for submissions on the 22nd November 2023.

We are inviting technology providers from across the globe to submit their decarbonization solutions geared toward ports and domestic vessels in Africa and/or the Caribbean.

The mission is clear: to expedite the adoption of green technology in developing countries, with a special focus on Small Island Developing States and Least Developed Countries.



ABOUT THE CHALLENGE

COMPETITION GUIDANCE

Eligibility

Scope

Judging criteria

Review process

Funding

Timeline

The countries

Target vessels and ports



GUIDANCE AND TECHNICAL OVERVIEW

1. GUIDANCE ON THE SUBMISSION OF INFORMATION

On 21st July 2023, the IMO announced the Maritime Technology Global Challenge, which opened the door for technology and solution providers, across the world, to participate in the challenge by submitting information about their technology decarbonization solutions for ports and/or ships under 5,000 GT. This document provides practical guidance on the submission process and technical details of the target countries.

AIMS OF THE GLOBAL CHALLENGE

Support countries in Africa and Caribbean to identify market ready technology solutions that will help improve the efficiency of selected vessels and / or ports, reduce operational costs and GHG emissions.

THE TARGET COUNTRIES

- Namibia (Africa)
- St. Kitts & Nevis (Caribbean)
- Trinidad and Tobago (Caribbean)
- 2nd African country (will soon be identified)

SUBMISSION CHECKLIST AND OVERVIEW

Before Applying:

1. **Check Eligibility:**
 - Verify that your technology solution aligns with the challenge scope.
2. **Scope Alignment:**
 - Confirm that the cost for demonstrating your technology in a beneficiary country does not exceed \$USD 500,000.
 - Ensure your technology is market-ready for installation and demonstration in 2024.
3. **Target Countries and Ports/Vessels:**
 - Verify the applicability of your technology solution to one or more of the identified ports and/or vessels in the target countries.
 - Ensure your solution directly addresses the aims of the Global Challenge.
4. **Submission Document Requirements:**
 - Prepare a concise submission document not exceeding 20 pages.
 - Clearly address key criteria, including technology introduction, GHG reduction impact, operational cost impact, installation feasibility, and potential for upscaling.



HIGHLIGHTS

- Any company / organization of any size and based anywhere in the world can apply
- To participate in the challenge, you must submit an information paper
- Each paper will be judged by an expert panel on a set of key criteria
- Up to four winning technology providers will be chosen
- Winners to receive between \$15k - \$30k to create a technical proposal
- Additional funds (up to \$500k) might be made available to demonstrate technology
- Beneficiary countries: Namibia, St Kitts and Nevis, and Trinidad & Tobago (a fourth country will be confirmed in the coming weeks)



IMO CARES: Country Profiles from the Africa Region, Beneficiary Country Port By: Lydia Ngugi, MTCC Africa Head



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Maritime Technology Cooperation Centre



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TGA
الهيئة العامة للنقل
Transport General Authority



Nexus of the IMO CARES to MTCC Africa: Global North South Cooperation Initiatives



The Country Profiles

#Decarbonization



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Port Name	A: Port of Walvis Bay
Port Ownership	Founded it in 1793. In 1910, Walvis Bay became part of the Union of South Africa. Walvis Bay finally became reintegrated into Namibia on 1 March 1994
Year Built	Founded it in 1793. In 1910, Walvis Bay became part of the Union of South Africa. Walvis Bay finally became reintegrated into Namibia on 1 March 1994
Certification and Accreditation	Namport is certified to the following standards: <ul style="list-style-type: none"> • ISO 14001:2015 (Environmental Management) • ISO 45001: 2015 (Occupational Health & Safety) • ISO 9001:2018 (Quality Management)
Cargo Traded	Salt, Charcoal, Fish & fish products Copper/ Lead and Concentrates, Petroleum, Vehicles, Fish and fish products, Wheat, Chemicals , Project Cargo



Port Type	A: Port of Walvis Bay Commercial Port (Containers, Breakbulk)
No. of Berths	13 commercial berths including New Container Terminal & Tanker Jetty
Types of Vessels Handled	Dry bulk, break bulk (clean and dirty) and Ro-Ro, Containers (including reefers), Liquid bulk, Passengers
Berth Utilization & Availability	Berth Utilization: 94.5% Berth Availability: 100%
Any planned expansions, upgrades, or improvements or Future projects or developments in the pipeline	North Port Development with the following developments planned (> 5 years): Renewal energy hub (manufacturing, distribution, export) Oil & Gas Supply base LNG Terminal Bulk Oil Storage facilities Dry Docking Facilities



Port Type	A: Port of Walvis Bay Commercial Port (Containers, Breakbulk)
Current initiatives and projects aimed at reducing carbon emissions	A: Port of Walvis Bay <ul style="list-style-type: none"> • Introduction of LED lights across Port Operations • Alternative Energy Sources being considered as part of the feasibility study completed for both Ports. Solar energy installation most feasible for the ports. • Alternative (dual fuel) fuel sources being considered for two new tugboats planned for acquisition in the next 2 years. • Feasibility study to be completed for cold ironing.
Vessel Traffic	<ul style="list-style-type: none"> • 2021-866 • 2022-899 • 2023-514(TYD)



Port Name	B: Port of Lüderitz
Port Ownership	Was officially inaugurated on May 19, 1910. In Official transfer of the Port of Lüderitz and the lighthouse situated at Diaz Point to Namport in 1994.
Year Built	Was officially inaugurated on May 19, 1910. In Official transfer of the Port of Lüderitz and the lighthouse situated at Diaz Point to Namport in 1994.
Certification and Accreditation	Namport is certified to the following standards: <ul style="list-style-type: none"> • ISO 14001:2015 (Environmental Management) • ISO 45001: 2015 (Occupational Health & Safety) • ISO 9001:2018 (Quality Management)
Cargo Traded	Manganese Ore, Zinc/ Zinc Concentrate/ Ore, Ice, Lead Concentrate, Petroleum, Wet fish Frozen Fish
Vessel Traffic	2021-726, 2022-737, 2023-482 (TYD)



Port Type	Commercial and Fishing Port
No. of Berths	2 Berths
Types of Vessels Handled	Dry bulk, break bulk (dirty), Liquid bulk, Passengers, fishing vessels
Current initiatives and projects aimed at reducing carbon emissions	<ul style="list-style-type: none"> •Introduction of LED lights across Port Operations •Alternative Energy Sources being considered as part of the feasibility study completed for both Ports. Solar energy installation most feasible for the ports. •Alternative (dual fuel) fuel sources being considered for two new tugboats planned for acquisition in the next 2 years.
Any planned expansions, upgrades, or improvements or Future projects or developments in the pipeline	<ul style="list-style-type: none"> . Quay wall extension by 300 meters and associated land area for port terminal operations. New Port (Long term (> 5 years) at Angra Point (Lüderitz) with 886 hectares of additional land through private-public partnership to cater for the export of Green Hydrogen (Green Ammonia) and Bulk export of Manganese through the port of Luderitz.



Potential Vessels



Potential Vessel Specifications: Nathaniel Maxuilili

- Vessel Type: Fisheries Patrol Vessel
- Year Built: 2001/2002
- Gross Tonnage:1421
- Fuel Used: Marine Diesel Oil
- Average Daily Fuel:5.0m³
- Average Speed:7.0knots

Type of Service: N-EEZ Patrol/
Inspecting Fishing Vessel

- Aux Engine Power:403kwX3
- Aux Engine Type:KT19-D(M)
- Flag:Namibia



The End



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GMN | The Global
MTCC Network
A global network for energy-efficient shipping

Domestic Shipping in the Caribbean Region: Beneficiary Ship(s) & Port(s) – IMO CARES

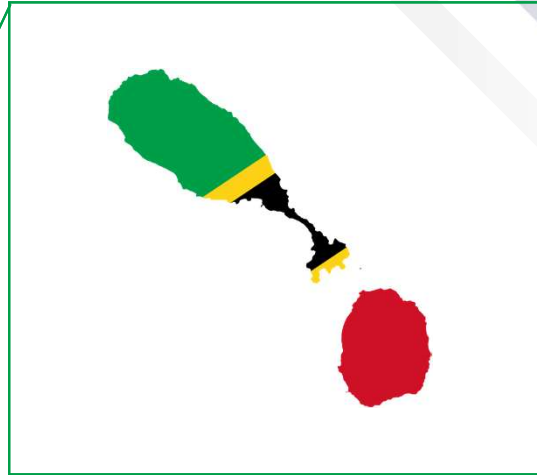
Mrs. Vivian Rambarath-Parasram
Director & Head, MTCC Caribbean



MTCC CARIBBEAN
Maritime Technology Cooperation Centre



Beneficiary Countries



St. Kitts and Nevis

MARAD



Potential
Beneficiary



Trinidad and Tobago

MARAD



Potential
Beneficiary

National Energy
CORPORATION OF TRINIDAD AND TOBAGO





Potential Ports

Port of Galeota

Port Type: Offshore Logistics Base / Energy Port
Cargo Traded: Oil & Gas Equipment & Logistics Cargo
No. of Berths: 5 Commercial / 1 Coast Guard
Vessel Traffic: 150 to 200 vessels per month

Decarbonization Initiatives: GHG Audit, Energy Efficiency, Renewable Energy Systems, Vessel Operations Management, Alternate Energy Fueling Systems, etc.

Planned Developments: Port expansion, Green Port Designation, LED upgrades, Solar/Wind powered applications.



Potential Ports

Port of Pt. Lisas

Port Type: Multipurpose Petrochemicals, Iron & Steel, Tug Mooring Facility

Cargo Traded: Liquid Bulk, Iron Ore, Aggregates, Urea, Methanol, DRI, UAN

No. of Berths: 6 Commercial & 1 Tug Mooring

Vessel Traffic: 40 vessels per month (Across 6 Berths)

Decarbonization Initiatives: Vessel Speed Monitoring for Reduced Emission in port, Solar power garbage compactor, GHG Audit for Vessel Operations, LED lighting, etc.

Planned Developments: Maintenance upgrades

National Energy^N
CORPORATION OF TRINIDAD AND TOBAGO



Potential Ports

Deep-Water Port

Port Type: Island's Main Container & Cargo Traffic and Cruise Business

Cargo Traded: Container, Break Bulk

Decarbonization Initiatives: Dedicated to advancing sustainability and environmental responsibility.

Planned Developments: Vision on incorporate the infrastructure to facilitate shore power at cruise pier, integration of renewable energy sources such as solar farm initiative.



Potential Vessel

NEC Voyager



NEC Spirit



National Energy
CORPORATION OF TRINIDAD AND TOBAGO



NEC Empress



NEC Legacy

Vessel Type: Passenger Launch
Year Built: 2013
Service: Passenger Transfer
Gross Tonnage: 100 GT [24 DWT]
Fuel Used: Marine Diesel Oil
Daily Fuel Consumption: 0.45m³
Propeller Type: Waterjet
Voyage Types: Coastal Water – 6NM
Average Speed: 28 knots
Power Demand: 10kWh

Vessel Type: Tugboat
Year Built: 2007
Service: Passenger Transfer
Gross Tonnage: 140 GT [56 DWT]
Fuel Used: Marine Diesel Oil
Daily Fuel Consumption: 1m³
Propeller Type: Fixed Pitch
Voyage Types: 15NM – 510NM
Average Speed: 8 knots
Power Demand: 38kWh

Vessel Type: Tugboat
Year Built: 2004
Service: Passenger Transfer
Gross Tonnage: 294 GT [149 DWT]
Fuel Used: Marine Diesel Oil
Daily Fuel Consumption: 1.7m³
Propeller Type: Fixed Pitch
Voyage Types: 15NM – 510NM
Average Speed: 8 knots
Power Demand: 52kWh (Sailing)

Vessel Type: Tugboat
Year Built: 2005
Service: Passenger Transfer
Gross Tonnage: 100 GT [83 DWT]
Fuel Used: Marine Diesel Oil
Daily Fuel Consumption: 0.25m³
Propeller Type: Fixed Pitch
Voyage Types: Coastal Water – 15NM
Average Speed: 8 knots
Power Demand: 10kWh



Delta Cardinal

Vessel Type: Offshore Supply Vessel

Year Built: 2014

Gross Tonnage: 3,830 GT [3,521 DWT]

Fuel Used: Marine Diesel Oil

Daily Fuel Consumption: 12.6m³

Voyage Types: 15NM

Average Speed: 12 knots

Installed Power: 4858kWh

Energy Saving Technology: Waste Heat Recovery
Shore Supply Connection (400 A)

Emission Control Measures: Exhaust Gas Cleaning

Emission Monitoring or Management System: Yes





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SUSTAINABLE DEVELOPMENT GOALS

1 NO POVERTY 	2 ZERO HUNGER 	3 GOOD HEALTH AND WELL-BEING 	4 QUALITY EDUCATION 	5 GENDER EQUALITY 	6 CLEAN WATER AND SANITATION
7 AFFORDABLE AND CLEAN ENERGY 	8 DECENT WORK AND ECONOMIC GROWTH 	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 	10 REDUCED INEQUALITIES 	11 SUSTAINABLE CITIES AND COMMUNITIES 	12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION 	14 LIFE BELOW WATER 	15 LIFE ON LAND 	16 PEACE, JUSTICE AND STRONG INSTITUTIONS 	17 PARTNERSHIPS FOR THE GOALS 	



TIMELINE OF THE CHALLENGE

**Nov -
2023**

- Release of technical details on CARES website
- Launch of the Challenge
- Portal open for submission papers (**22 Nov**)

**Jan -
2024**

- **Submission deadline (7 Jan)**
- Winners announced (31 Jan)

**Feb – April
2024**

- Winners receive funding
- Development of technical proposals

CONTACT INFORMATION



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Visit imocares.imo.org/the-maritime-technology-global-challenge/

