Due to COVID-19, the last 6 months have been challenging for the EU-IMO GMN Project. The work plans for all Maritime Technology Cooperation Centres (MTCCs) have been disrupted. One of the greatest impacts on the project has been the restrictions on organising face to face meetings, capacity building workshops and conferences. All of which have been a cornerstone of the MTCCs' work programme.

Despite these challenges, the Centres have moved quickly to develop alternative plans and ensure continued engagement across the respective regions. MTCC’s are now scheduling online activities and have restructured so that the Centres remain operational. Adapting to the new restrictions has been the priority.

A major achievement of the GMN early in 2020, was the successful completion of all MTCC Pilot Projects. This major undertaking which focused on data collection and fuel analysis on ship fuel consumption, as well as the development and application of energy efficiency practices and technologies, has produced significant results. The focus now is on ensuring results are disseminated as widely as possible. Pilot Project reports are now available from the GMN website.

Despite successfully completing Pilot Project and capacity building work, the GMN project was sad to say farewell to the MTCC-Latin America, which after 3 years of operations is now no longer being funded by the EU-IMO GMN project.

Finally, there were changes within the Project Coordination Unit (PCU). Ms. Petra Ghassemi was promoted into the position of Project Officer, and PCU welcomed Ms. Melanie Sgueglia as Finance and Administration Officer.

This Newsletter updates you on our journey over the last six months, what we have achieved and what is upcoming for the GMN.

Please enjoy and we look forward to your feedback!

Anton Rhodes
GMN Project Manager

"A major achievement of the GMN early in 2020, was the successful completion of all MTCC Pilot Projects"
Senior maritime administrators in the Caribbean have had the chance to network and bring themselves up to speed with the latest IMO regulatory developments, during a recent IMO-led regional workshop for senior maritime administrators, held in Castries, St. Lucia (5-6 March).

Participants received detailed information about activities organized under IMO’s Integrated Technical Cooperation Programme (ITCP) aimed at building capacity in the region to comply with international rules and standards related to maritime safety and the prevention of maritime pollution. Participants had a chance to ask questions on the outcomes of many IMO meetings of special interest to their region and were updated on knowledge partnerships and ongoing major projects, as well as the IMO Member State Audit Scheme. They also heard about the latest work of the Regional Marine Pollution Emergency, Information and Training Centre – Caribe (RAC/REMPEITC-Caribe), the Caribbean Memorandum of Understanding on Port State Control (CMoU), the Caribbean Community (CARICOM) Secretariat (in the context of maritime transport) and the Women in Maritime Association Caribbean (WiMAC). During the event, the Maritime Technology Cooperation Centre for the Caribbean (MTCC Caribbean) presented on their work and on the support, which has been provided to the Caribbean region by the IMO through MTCC Caribbean.

The workshop was hosted by the Saint Lucia Air and Sea Ports Authority (SLASPA). Participants attended from: Antigua and Barbuda, the Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname and Trinidad and Tobago; and the territories/regions of Anguilla (United Kingdom), Bermuda (United Kingdom), British Virgin Islands (United Kingdom), the Cayman Islands (United Kingdom), Curaçao (Netherlands), Martinique (France), Montserrat (United Kingdom), Sint Eustatius (Netherlands), Sint Maarten (Netherlands) and Turks and Caicos Island.
SUMMARY OF DELIVERED ACTIVITIES BY MTCCS

**JANUARY**

**MTCC Asia Workshop on IMO’s Global Sulphur Cap**

Jointly organized by Shanghai Maritime University, MTCC-Asia, Department of Marine Administration Myanmar, World Maritime University and Danish Maritime Authority, workshop on IMO’s global Sulphur cap was successfully held in Yangon, Myanmar 13-15 January 2020. 50 experts and professionals from maritime countries participated in the workshop. The workshop aimed to promote best practices in implementing low sulphur oil standards by building regional capacity to implement new limits on sulphur content in ship fuels. It helped to increase the efficiency of law enforcement in the region and to maintain a level playing field in the shipping industry on a global scale.

**FEBRUARY**

**MTCC Caribbean hosted Targeted Training Workshop on IMO’s Global 2020 Sulphur Cap**

A “Targeted Training Workshop on the IMO’s Global 2020 Sulphur Cap” was hosted by The Maritime Technology Cooperation Centre Caribbean (MTCC Caribbean) on February 12th, 2020, at The University of Trinidad and Tobago’s (UTT), Chaguaramas Campus.

The Global 2020 Sulphur Cap targets the reduction of sulphur oxides (Sox) which are known to have harmful effects on both human health and the environment. It came into effect on January 1st, 2020 and limits the use of fuel oil to a 0.5% sulphur limit on all sizes of ships. The workshop addressed all aspects of the 2020 sulphur cap, inclusive of the

- Origin and effects of Sulphur dioxides from ships fuel
- Background of MARPOL Annex VI, Regulation 14
- Industry options for removing SOx from emissions and lowering Sulphur content in fuel
- Sulphur regulations compliance using existing management systems
- Verification of compliance from an operator’s perspective
- Consequences of non-compliance from Port, Coastal and Flag State perspectives

The sessions were facilitated by Ms. Vivian Rambarath-Parasram, Captain Sukhjit Singh, Mr. Stephan Nanan with active support from the technical secretariat consisting of Ms. Sarita Mahabir, Ms. Suzette Balkaran, Mr. Tevin Parris and Mr. Michael Razack. The workshop, specifically targeted seafarers from the Caribbean maritime sector and was attended by over fifty (50) participants at UTT Chaguaramas Campus. Roundtable discussions provided the means for valuable input from industry and regulator representatives such as Mr. Collin Young, IMO’s Regional Maritime Adviser, Mr. Collin Piper, Paria Fuel Trading Company, Mr. Namdeo Maharaj, Analytical Technologies Ltd. Insights into challenges with obtaining compliant fuel, creating and utilising blended fuels and technical guidance on compliance with sulphur cap requirements, was gained.
The audience actively participated in generating the following action items to progress the maritime agenda and enforcement of the 2020 Sulphur Cap in the local maritime sector:

- Formation of a committee between Maritime Services Division, the Institute of Marine Affairs and the Environmental Management Authority to examine the effects of open loop scrubbers on the environment
- Utilise the Trinidad and Tobago Merchant Officers Association to lobby for maritime policy reform
- Targeting entrepreneurial activities for sustaining the work of the MTCC Caribbean
- An appeal was made to industry and regulator representatives present to do their parts to progress the sector
- Improved awareness of the methods of dissemination of circulars to keep up to date with new requirements

The workshop provided the sector representatives in attendance with a good understanding of the requirements and issues involved in compliance and enforcement of IMO's Sulphur Cap regulations.
COMPLETION OF MTCC PILOT PROJECTS

Beginning in 2017, each MTCC embarked on an ambitious journey to promote the uptake of low carbon technologies and operations in maritime transport through implementation of pilot projects; thus creating an enabling environment in the regions for shipping energy efficient practices.

The Centres were also focused upon establishment of pilot voluntary “Data Collection and Reporting (DCR)” systems in support of ship-owners and maritime administrations.

The principle targets were those regions with a significant number of Least Developed Countries (LDCs) and Small Island Developing States (SIDS).

3 years on, and that journey is now complete. MTCCs have successfully completed their Pilot Projects, and in doing so have taken huge strides to help promote ship energy efficiency in their respective regions.

Pilot Project Highlights:
- MTCC-Asia produced new guidance on new trim optimization technique (using AI learning) and circulated to over a thousand vessels
- MTCC’s in Caribbean and Latin America developed Technology Needs Assessments, which highlight technology demand / availability and outline a regional approach for the uptake and diffusion of energy efficient technologies
- MTCC-Africa undertook port energy audits in East and West Africa, and provided recommendations for improved operations
- MTCC Pacific undertook installation of marine solar systems on board vessels in Vanuatu and Samoa
- All MTCC’s undertook collection and analysis of ship fuel consumption data, which creates a data baseline against which ship operators / ships crew and maritime administrations can make energy efficiency improvements.

All Pilot Project reports are available from GMN.imo.org
EU, CLIMATE CHANGE AND TRANSPORT DEVELOPMENTS

A European Green Deal

In December 2019, the European Commission presented the ‘Green Deal’ for Europe and in January 2020 the European Parliament voted to support the deal, with requests for higher ambition.

The European Green Deal is a set of policy initiatives by the European Commission that shall lead the EU to become carbon neutral by 2050. This means that, by 2050, EU carbon emissions shall be balanced by at least equal levels of carbon removal. An impact assessed plan will also be presented for a new greenhouse gas emission reduction target of 50-55% for 2030 compared with 1990 levels. The Green Deal reaffirms and enhances the EU’s commitment to the Paris climate agreement, adopted in December 2015.

In terms of shipping, the EC is focusing on digital technologies to enable automated mobility and smart traffic management systems, which will help make transport cleaner. Other key areas include the production and deployment of sustainable alternative transport fuels, energy storage, and carbon capture, storage and utilisation. The Commission also envisages extending emissions trading to the maritime sector.

For more information on the European Green Deal, see:
https://ec.europa.eu/transport/themes/sustainable_en
Implementation of the IMO 2020 sulphur limit - verifying sulphur content of fuel on board – guidelines agreed

IMO 2020, the 0.50% limit for sulphur in ships’ fuel oil, has been in effect since 1 January 2020, cutting sulphur oxide emissions from ships operating worldwide. From 1 March 2020, the carriage ban on non-compliant fuel oil (except for ships with exhaust gas cleaning systems installed) entered into force under MARPOL Annex VI, helping to support implementation of the global sulphur limit.

To support the safe and consistent sampling of fuel oil being carried for use, and the enforcement of the carriage ban, the Sub-Committee finalized draft guidelines which provide a recommended method for the sampling of liquid fuel oil intended to be used or carried for use on board a ship.

Reducing the impact on the Arctic of Black Carbon emissions from international shipping

Black Carbon in the context of international shipping is the product of incomplete combustion of carbon-based fuels. Black Carbon emissions contribute to climate change as a ‘Short-Lived Climate Pollutant’.

IMO has been looking at how to measure and report on Black Carbon emissions, as part of its work to consider the impact on the Arctic of Black Carbon emissions from international shipping. A reporting protocol for voluntary measurement studies to collect Black Carbon data and Black Carbon measurement methods for data collection have already been agreed.

The Sub-Committee established a correspondence group to advance the development of a standardized sampling, conditioning, and measurement protocol, including a traceable reference method and an uncertainty analysis, taking into account the three most appropriate Black Carbon measurement methods (light absorption filter smoke number (FSN); photo-acoustic spectroscopy (PAS); and laser induced incandescence (LII)), to make accurate and traceable (comparable) measurements of Black Carbon emissions; and investigate the linkages between the measurement systems and policy options.

Revised guidelines on exhaust gas cleaning systems (scrubbers) agreed

The Sub-Committee finalized its work on revising the 2015 Guidelines for exhaust gas cleaning systems (EGCS, also known as "scrubbers").

The revision is aimed at enhancing the uniform application of the guidelines, in light of recent technical developments and experience gathered from approvals and operation of such alternative compliance systems.
In addition to choosing cleaner, greener fuels, utilizing onshore power supply service (also known as “cold ironing”, “alternative maritime power” and “shore-side electricity”) is another solution to reducing air pollution and emissions from ships, as well as limiting local noise. IMO is addressing the need for global standards for the process of providing shoreside electrical power to a ship at berth, while its main and auxiliary engines are turned off.

Interim Guidelines on safe operation of on-shore power supply (OPS) service in port for ships engaged on international voyages were finalized by the Sub-Committee, for submission to the Maritime Safety Committee (MSC) for approval.

All IMO meetings originally planned to be held between late March and July 2020 have been postponed due to the COVID-19 pandemic. However, work has begun to prepare for a revised meeting programme for the remainder of 2020, including the possibilities for virtual meetings.

Next steps for IMO:
- **6-10 JULY 2020**
  The Informal preliminary discussion session (virtual) on short-term measures for reduction of GHG emissions from ships
- Seventh meeting of the Intersessional Working Group on Reduction of GHG Emissions from Ships (postponed from March 2020 until further notice)
- Marine Environment Protection Committee (MEPC 75), (postponed from April 2020 until further notice)
NEW IMO DEPARTMENT

New IMO department will tackle key global issues through innovative partnerships

A new department has been established within the IMO Secretariat to focus on supporting Member States to tackle key global issues in the context of international shipping and help promote sustainable development.

Operational from 1 March 2020, the Department of Partnerships and Projects will enhance and strengthen partnerships with external stakeholders and donor agencies to tackle some of the major global challenges which impinge on today's maritime world.

It becomes the focal point for developing partnerships and coordinating long-term donor-funded projects, as well as implementing IMO's resource mobilization strategy to strengthen its Integrated Technical Cooperation Programme.

The new department reflects IMO's strong and continuing commitment to helping its Member States achieve the 2030 Agenda for Sustainable Development, with its 17 Sustainable Development Goals, and implement the Organization's regulatory framework.

It will serve as a gateway for partnership opportunities with a wide range of external partners, including IMO Member States, UN agencies, financial institutions, NGOs, IGOs and the private sector. A key objective will be to increase IMO's existing portfolio of donor-supported long-term projects supporting its technical cooperation objectives.

It will promote a culture of collaboration and innovation, creating broader engagement and partnerships with maritime and ocean-related stakeholders.

With the new department, the existing Partnerships and Resource Mobilization team within IMO's Technical Cooperation Division and the Major Projects team in the Marine Environment Division come together under a single umbrella. The resultant synergy and harmonization is designed to ensure that IMO Member States are better served.

IMO Secretary-General Kitack Lim said, “For the benefits of sustainable development to be evenly spread, all countries must be able to play a full and active part in maritime activities. Building partnerships is key to this. This new department will help that to happen. It's very much in line with my vision of a ‘Voyage Together’, where no one is left behind when it comes to the effective implementation of IMO’s global standards.”

The new department will be headed by Mr. Jose Matheickal, who brings more than 15 years' experience of leading and coordinating major projects at IMO, supported by Mr Youngso Kim, who will lead the partnerships function within the new structure.
GREENVOYAGE-2050

IMO new global project to tackle maritime GHG emissions

A major international project to support the International Maritime Organization (IMO)’s initial strategy for reducing greenhouse gas emissions from shipping has been launched in May 2019.

Entitled GreenVoyage-2050, the project will initiate and promote global efforts to demonstrate and test technical solutions for reducing such emissions, as well as enhancing knowledge and information sharing to support the IMO GHG reduction strategy.

GreenVoyage-2050 is a collaboration between IMO and the Government of Norway and will run for an initial two-year period. More than 50 countries in 14 sub-regions across the globe are expected to participate, including developed countries and strategic partners from the private sector, who will contribute expertise and experience.

The project will also build capacity in developing countries, including small island developing states (SIDS) and least developed countries (LDCs), to fulfil their commitments to meet climate-change and energy-efficiency goals for international shipping.

Initially 12 countries from 6 high priority regions (Asia, Africa, Black Sea / Caspian Sea, Caribbean, Latin America and Pacific) are taking pilot roles in the respective regions to champion the national actions. Pilot countries will subsequently help catalysing a regional momentum by supporting other partnering countries in their respective region to follow the path.

GreenVoyage-2050 will eventually be scaled-up vertically (more technology demonstration and infrastructure efforts) and horizontally (more pilot countries joining the project) through mobilising additional resources. The objective is to accelerate implementation of the initial IMO GHG strategy.

Partnerships with existing projects and programmes (such as the Global MTCC Network - GMN and Norway’s Green Shipping Programme) will be explored, with a view to drawing on their results to encourage the phasing in of zero and low-emission solutions for shipping in developing countries.

Aims: Supporting international shipping to achieve GHG emissions reductions by at least 50% by 2050 compared to 2008. GreenVoyage-2050 will aim to expand Government and port management capacities to undertake legal and policy reforms, develop National Action Plans, catalyze private sector partnerships, promote innovation, enable technology transfer and deliver pilot demonstration projects to facilitate technology uptake, all through a broad range of coordinated actions by a number of Pioneer Pilot Countries (PPC), New Pilot Countries (NPC), Partner Countries (PAC), industry partners and strategic partners at national, regional and global levels.

Funding: This global project is funded by the Norwegian Ministry of Climate and Environment for an initial period up to May 2022 (USD 5.4 million) with an expectation of additional funding beyond 2022, for scaling-up this project.

GreenVoyage2050 builds upon two IMO projects that may be regarded as baseline projects in this area:
EU-IMO GMN Project (Capacity Building for Climate Mitigation in the Maritime Shipping Industry)
GEF-UNDP-IMO GloMEEP Project (Global Maritime Energy Efficiency Partnerships)
JUST IN TIME ARRIVAL GUIDE

Just In Time Arrival Guide issued to support smarter, more efficient shipping

The Guide has been developed by the IMO’s Global Industry Alliance to support low carbon shipping (Low Carbon GIA), based on research and discussion amongst its membership, and the Guide documents the findings of a series of industry roundtables which brought together nearly 50 companies and organizations who are key stakeholders in the port call process.

Widely recognized as a means of increasing port efficiency and port call optimization, the successful implementation of JIT Arrivals can have a significant environmental impact through reduced GHG emissions from optimizing the ships speed to arrive just in time. The concept is based on the ship maintaining an optimal operating speed, to arrive at the Pilot Boarding Place when the availability is assured of: 1. berth; 2. fairway; and 3. nautical services (pilots, tugs, linesmen). JIT Arrivals also contributes to reduced time at anchorage and therefore reduced congestion in the port area. It is estimated that ships spend up to 9% of their time waiting at anchorage, which could be reduced through the implementation of JIT Arrivals.

The Guide provides a holistic approach to Just In Time Arrivals, considering contractual aspects to its implementation as well as operational. The Guide is envisaged as a useful toolkit for many stakeholders including shipowners, ship operators, charterers, ship agents, shipbrokers, port authorities, terminals, nautical and vessel service providers. All these actors ultimately play a key role in implementing the necessary changes and facilitating the exchange of communication required to realize JIT Arrivals.

The Guide provides guidance for all shipping segments. However, it suggests that JIT Arrivals could be implemented for the container segment first, as there are fewer contractual barriers and containerships often run on more predictable schedules with shorter port to port distances. The Guide then provides next steps on how efforts can be scaled-up, replicated and adapted, with a view to implementing JIT Arrivals across other sectors.

The Guide considers in detail the port call business process, and how the exchange of key information and data that is required for JIT Arrivals can be improved. It highlights the need for harmonized standards, acceptable to the IMO, and their implementation by all stakeholders involved in the port call process. The work is aligned with recent developments achieved by IMO’s Expert Group of Data Harmonization (EGDH), which agreed to include new operational data elements in the IMO Reference Data Model which relate to the concept of Just In Time Arrival. The additional dataset is expected to be approved by IMO’s Facilitation Committee. This is seen as an important step towards facilitating the implementation of the JIT concept and will allow for digital exchange of data between the port and ship. Such exchange is in line with resolution MEPC.323(74), which invites Member States to encourage cooperation between the shipping and port sectors to contribute to reducing GHG emissions.

Global Industry Alliance to support low carbon shipping (Low Carbon GIA)

The Low Carbon GIA is a public–private partnership with the aim to identify and develop innovative solutions to address common barriers to the uptake and implementation of energy efficiency technologies and operational measures. The Low Carbon GIA was originally established under the framework of the GEF-UNDP-IMO Global Maritime Energy Efficiency Partnerships Project (GloMEEP Project), and since the conclusion of the GloMEEP Project at the end of 2019, the Low Carbon GIA has been operating under the framework of the IMO-Norway GreenVoyage2050 Project.

Download the Guide here:
WHAT IS NEXT
As we consider the immediate future of the GMN Project, the remainder of 2020 will see MTCCs focus upon the following activities and initiatives. It should be noted that the timing and scope of activities will likely be affected due to COVID-19.

- disseminate the results of the pilot projects, which includes producing new guidance material and sharing recommendations to improve vessel and ports performance
- to encourage technology transfer through delivery of regional conferences and technology exhibitions (likely to be delivered remotely), which will provide a platform for technology providers to reach out to the respective regions – so we would encourage technology providers to contact us if they would be interested in participating
- focus on MARPOL Annex VI, where the MTCCs will continue their important capacity building work through workshops and technical training (likely to be delivered remotely)

SUSTAINABILITY
A vital part of the MTCCs 2020 work programme is to implement plans for financial sustainability of the centres.

The current stream of financial support (based on EU contributions) is scheduled to end in 2020. It is expected that in the future, the funding model will evolve from having a single revenue stream, to multiple revenue streams. Furthermore, a core component of the new financial model will be centred around the self-sufficiency of MTCCs, where funding would be raised through various means, which includes but is not limited to the provision of a diverse range of services.

In this respect, after nearly 4 years of successful operations, the MTCCs have acquired the necessary experience and technical know-how to provide the following services:

- Delivering capacity building activities;
- Management and implementation of similar projects planned within the regions, as well as identifying potential project opportunities for optimizing energy efficiency in the sector;
- Providing technical services related to maritime climate action; and
- Providing Advisory services and access to MTCCs data banks

LOOKING AHEAD
After several fruitful years of operation, the MTCCs are now well established and respected in their regions. They have strong technical expertise and a proven track record of successful delivery.

MTCCs are also perfectly positioned to support and potentially partner with other regional and global initiatives.

With important groundwork having been laid, the MTCCs will serve as a key platform to partner with other stakeholders and are open for business to find new and innovative ways to achieve our key objective of reducing GHG emissions in the maritime sector.
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<tr>
<th>EVENT</th>
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<tr>
<td>MTCC Caribbean Regional Webinar Series</td>
<td>1 OCTOBER 2020 - 30 NOVEMBER 2020</td>
<td>University of Trinidad and Tobago, Caribbean</td>
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<td>MTCC Asia Regional Ship Energy Efficiency Technology Promotion Campaign</td>
<td>31 OCTOBER 2020 - 31 DECEMBER 2020</td>
<td>Asia</td>
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<td>MTCC Africa National Workshop – North Africa (Arab Academy/Morocco)</td>
<td>23 NOVEMBER 2020 TBC</td>
<td>Morocco, Africa</td>
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<td>MTCC Caribbean Online Training Programme</td>
<td>1 DECEMBER 2020 - 31 JANUARY 2021</td>
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<tr>
<td>MTCC Africa National Workshop</td>
<td>7 DECEMBER 2020 TBC</td>
<td>Benin, Africa</td>
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<tr>
<td>MTCC-Asia Regional Ship Energy Efficiency Technology Conference</td>
<td>8 DECEMBER 2020 - 10 DECEMBER 2020</td>
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<td>MTCC Africa Focal Point Committee Training</td>
<td>4 JANUARY 2021 TBC</td>
<td>Africa</td>
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<tr>
<td>MTCC Asia Energy Efficiency Conference &amp; Exhibition</td>
<td>11 JANUARY 2021 - 13 JANUARY 2021</td>
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<td>MTCC Pacific Women In Maritime Virtual discussion</td>
<td>11 JANUARY 2021</td>
<td>Pacific</td>
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<td>MTCC Pacific follow-up meeting/workshop Suva, Fiji</td>
<td>5 FEBRUARY 2021</td>
<td>Suva, Fiji, Pacific</td>
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<tr>
<td>MTCC Pacific follow-up meeting/workshop Nadi, Fiji</td>
<td>12 FEBRUARY 2021</td>
<td>Nadi, Fiji, Pacific</td>
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</table>
MTCC Caribbean Energy Efficiency Conference & Exhibition
15 FEBRUARY 2021 - 17 FEBRUARY 2021 TBC
Trinidad and Tobago, Caribbean

MTCC Pacific follow-up meeting/workshop Samoa
19 FEBRUARY 2021
Samoa, Pacific

MTCC Africa Energy Efficiency Conference & Exhibition
1 MARCH 2021 - 3 MARCH 2021 TBC
Africa

MTCC Pacific meeting with regional maritime industry stakeholders
15 MARCH 2021
Pacific

WMU Co-Sponsored MTCC-Africa Sulphur Cap Enforcement Workshop
22 MARCH 2021 TBC
Mombasa, Kenya
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