



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

# GMN SUMMARY REPORT

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## MESSAGE FROM THE EDITOR

Throughout the first half of 2019, the Global MTCC Network (GMN) continued to foster collaboration with key stakeholders to advance IMO's GHG reduction targets.

During the reporting period, we participated in multiple forums and events to discuss the role of shipping, ports and Governments to improve energy efficiency. Such events included the Smart Ports Summit, Docks the Future Conference and NOR-Shipping. These opportunities for outreach were complimented by the release of a new GMN film and infographic.

GMN continued its capacity building activities with eight workshops being delivered across the five MTCC regions. In addition, MTCC's Asia and Pacific increased their regional outreach by taking major steps to launch their distance learning programmes.

Another important development was the retrofitting of vessels in Vanuatu and Samoa as part of the MTCC-Pacific pilot project. The trialling of solar systems will help promote renewable energy across the Pacific.

These are just a few highlights from a full activity programme.

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



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# GMN OUTREACH

## SMART PORTS SUMMIT

The GMN project was part of the Smart Ports Summit that took place between 19 - 20 February in London. During the event, an overview presentation of the GMN and IMO's GHG reduction strategy was provided by the project team.

The main focus of the event was on the drivers behind change in the ports and terminals sector and examining the biggest challenges to digitisation of ports.



## DOCKS THE FUTURE CONFERENCE, GLOBAL MTCC NETWORK MEETING, STUDY VISIT AND TECHNICAL WORKSHOP

Representatives of the five MTCCs met for a Digital Port workshop in Trieste, Italy and to participate in the DocksTheFuture International Conference during the first week of April.

The workshop provided an opportunity to discuss the role of GMN and Smart Ports and the benefits of digitisation and new technologies for ports and shipping. In addition, the meeting included a site visit to the Port of Trieste as well as a technical providers' sessions.

Towards the end of the week the team participated in the DocksTheFuture Mid Term Conference which included several technical sessions on technologies, processes and capacity building actions.



## GMN PROJECT PRESENTATION AT ISWG-GHG 5

On 8 May during the second day of deliberations at the 5th Intersessional meeting of the Working Group on Reduction of GHG Emissions from Ships, the GMN Project presented on the network's achievements. In addition, practical examples of how the network can, in the future, play a key role to support the IMO's GHG reduction strategy were discussed. At the core of MTCCs' future work will be their support in implementing the IMO GHG reduction strategy, with particular emphasis on the needs of Least Developed Countries and Small Island Developing States, as well as technology cooperation and transfer such as Just-In-Time Operation, Shore Based Power Supply and Energy Efficient Equipment and Operations.



## GMN AT NOR-SHIPPING 2019

The GMN featured prominently during the "Africa@NorShipping" event in Oslo, Norway (4-6 June). GMN was part of the IMO exhibition booth during the three-day event.

During the panel discussion on "Ensuring environmental and economic sustainability and improving maritime safety and security in Africa's blue economy", Ms. Nancy W. Karigithu, Principal Secretary, State Department for Maritime and Shipping, Kenya Ministry of Transport talked about MTCC-Africa's important role in regard to capacity building in the region, MARPOL Annex VI ratification and the implementation of IMO's Initial Strategy on GHG Emissions Reduction.



## WORLD OCEANS DAY

In June 2019 the National Maritime Museum in Greenwich played in one of its public galleries the second GMN film on a continuous loop throughout the World Oceans Day.

The Museum decided to focus on "positive activism" to raise awareness about marine environment and to campaign for fast and collective action.





## IMO – MEPC 74 OUTCOMES

IMO's Marine Environment Protection Committee (MEPC 74) pushed forward with a number of measures aimed at supporting the achievement of the objectives set out in the initial IMO strategy on reduction of greenhouse gas (GHG) emissions from ships, in line with the Paris Agreement under UNFCCC and the United Nations 2030 Agenda for Sustainable Development.

The MEPC 74 session approved amendments to strengthen existing mandatory requirements for new ships to be more energy efficient; initiated the Fourth IMO GHG Study; adopted a resolution encouraging cooperation with ports to reduce emission from shipping; approved a procedure for the impact assessment of new measures proposed; agreed terms of reference for the sixth and seventh intersessional working groups to be held in November 2019 and in March 2020 respectively in order to expedite the work.

In particular, the Committee adopted resolution MEPC.323(74) on Invitation to Member States to encourage voluntary cooperation between the port and shipping sectors to contribute to reducing GHG emissions from ships.

In addition, a new major international project to support the Initial Strategy was launched: GreenVoyage-2050. The project

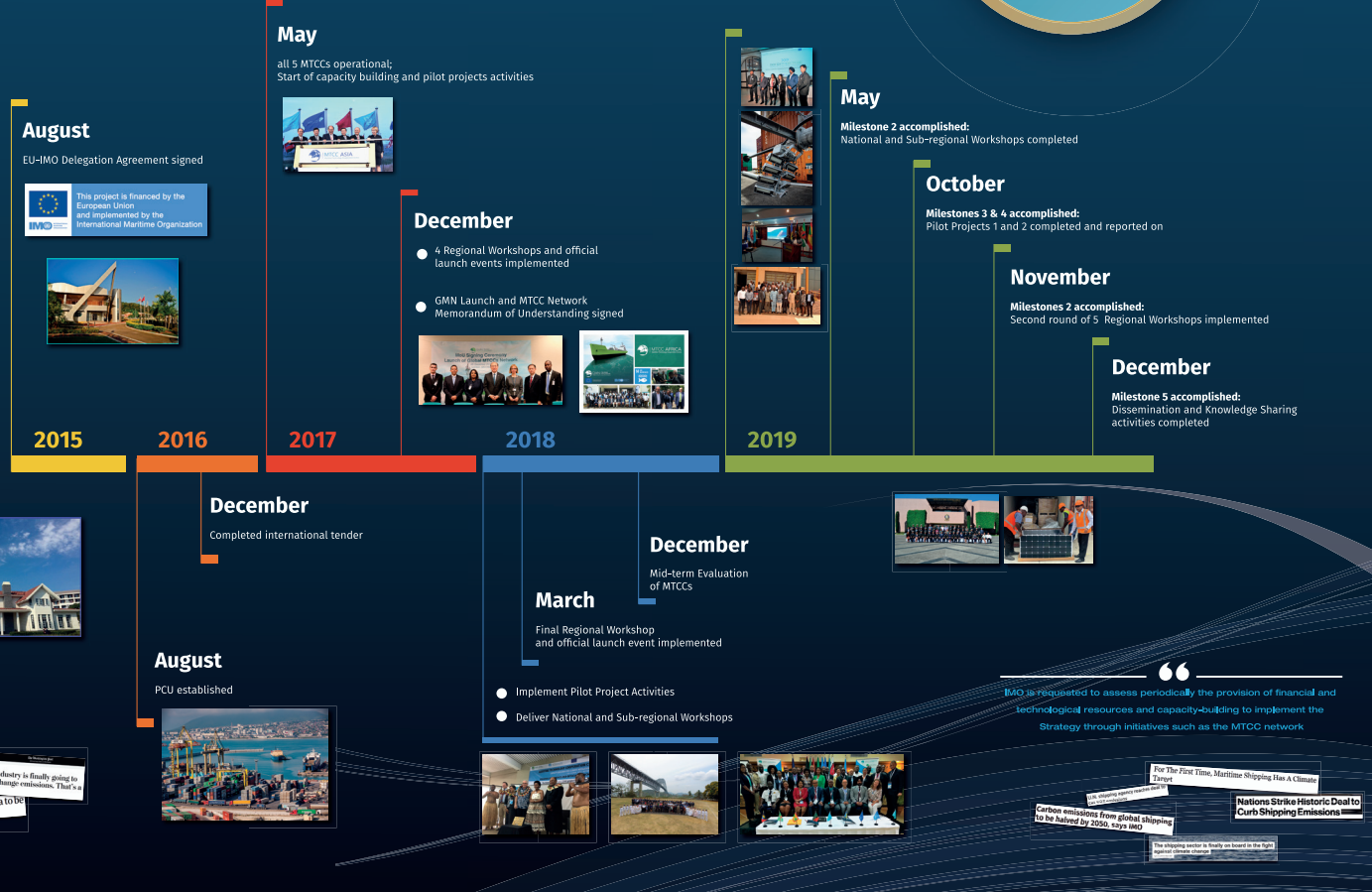
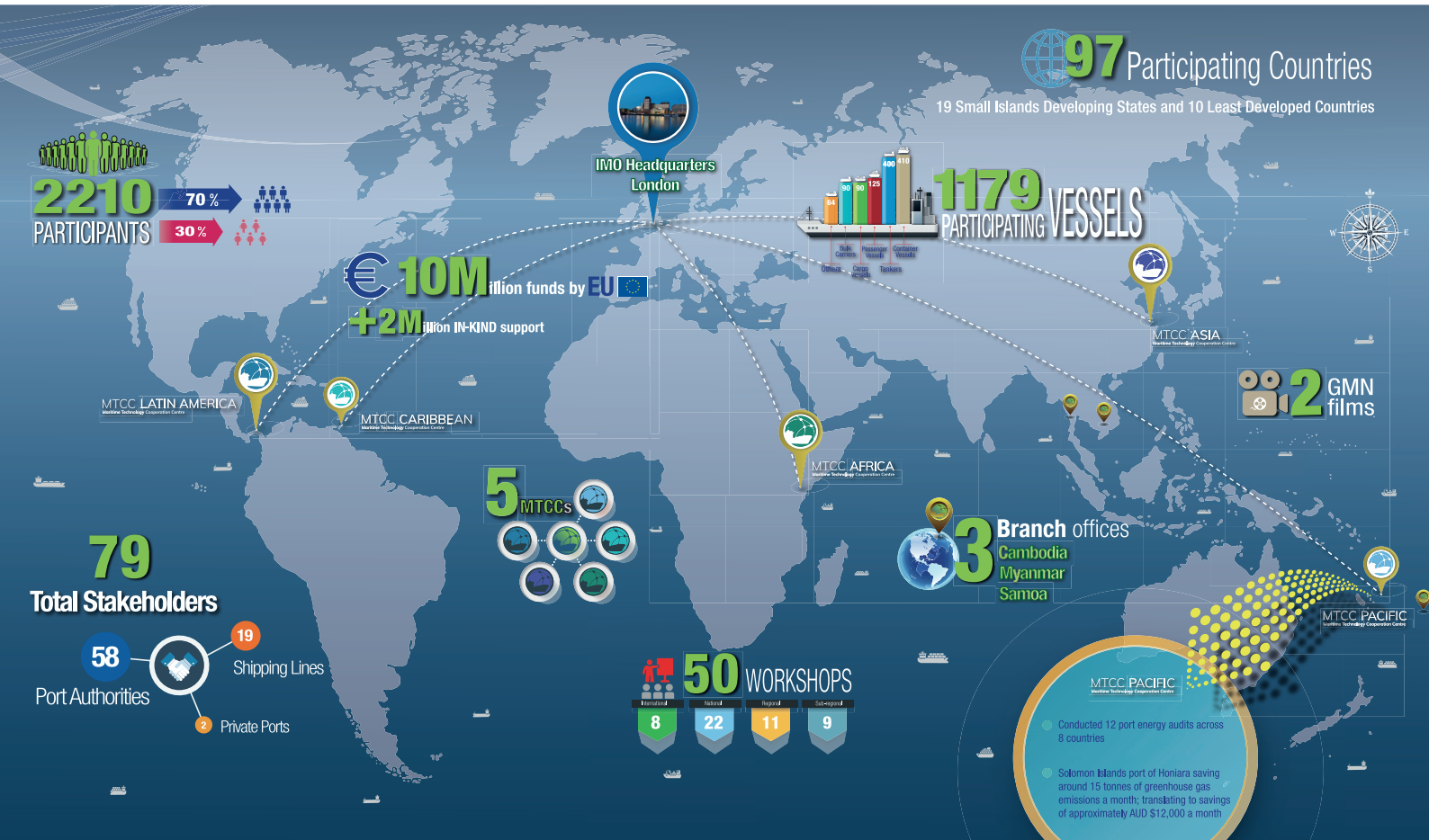
will provide technical assistance to developing countries, support technology transfer and promote green technology uptake to improve energy efficiency and reduce GHG emissions throughout the maritime sector. GreenVoyage-2050 is a collaboration between IMO and the Government of Norway and will run for an initial two-year period. More than 50 countries in 14 sub-regions across the globe are expected to participate and partnerships with existing programmes will be explored.

In addition, the Committee approved and adopted a comprehensive set of guidance and guidelines to support the consistent implementation of the lower 0.50% limit on Sulphur in ships' fuel oil, which will enter into effect from 1 January 2020.

### GHG TC TRUST FUND

The MEPC agreed to establish a voluntary multi-donor trust fund ("GHG TC-Trust Fund"), to provide a dedicated source of financial support for technical cooperation and capacity-building activities to support the implementation of the Initial IMO Strategy on reduction of GHG emissions from ships.

# THE GLOBAL MTCC NETWORK PRODUCED A NEW INFOGRAPHIC SHOWING ITS PROGRESS AND ACHIEVEMENTS



# SUMMARY OF DELIVERED ACTIVITIES BY MTCCS



## JANUARY – MTCC-CARIBBEAN 5TH NATIONAL WORKSHOP

MTCC-Caribbean delivered the 2nd of two workshops targeting countries of the Eastern Caribbean for the purpose of building capacity for climate change mitigation in the maritime shipping industry. The 2nd Eastern Sub-Regional Workshop served as a medium for the exchange of knowledge, ideas and experiences concerning the reduction of emissions from ships and the existing legal and institutional frameworks. The event took place from 29 to 30 January in St. Vincent & the Grenadines and was attended by a mix of regional stakeholders comprising representatives from maritime administrations, shipping agents, ship owners, ship operators, regulators, ministry representatives, maritime technology providers, green energy providers, international organizations and academics.



## FEBRUARY – MTCC-AFRICA 4TH NATIONAL WORKSHOP

MTCC-Africa held its 3rd National Workshop in collaboration with Ghana Maritime Authority from 4 to 5 February. The objective was to ensure that there was a keen interpretation of the following topics: MARPOL Annex VI, European Union and climate mitigation, the future of shipping, Ghana's legislation on marine pollution, ship energy efficiency, and outcomes of the Marine Environmental Protection Committee 73. The Deputy Minister for Transport, Hon. Daniel Nii Kwartei Titus Glover highlighted the efforts of MTCC-Africa in bringing together all the key stakeholders to sensitize the impact of GHG emissions on climate change and the need to observe energy efficiency measures onboard ships.



## MARCH – MTCC-LATIN AMERICA 4TH NATIONAL WORKSHOP

From 13 to 15 March, MTCC-Latin America delivered its 4th Workshop on “Ship Energy Efficiency and Emissions Reduction” at the Centro de Estudios Superiores Navales, Mexico City, Mexico. The event was attended by representatives from the European Union in Mexico, IMO, Maritime Authority of Mexico, SEMAR, CESNAV, SEMARNAT, SCT, SENER, CONUEE, PEMEX, prestigious universities as well as practitioners from the maritime and port industries of Mexico. During this workshop participants updated their knowledge on key issues of energy efficiency in the maritime transport industry. Attendees exchanged experiences on the subject and identified challenges to overcome. In addition, different views were expressed as to the accession and later implementation of MARPOL Annex VI in Mexico.



## MARCH – MTCC-CARIBBEAN 6TH NATIONAL WORKSHOP

MTCC-Caribbean delivered a workshop targeting countries of the Southern Caribbean for the purpose of building capacity for climate change mitigation in the maritime shipping industry. The workshop was hosted from 18 to 19 March at the University of Trinidad and Tobago's Chaguaramas Campus. It was the last of six sub-regional workshops that aim to facilitate capacity building in the region by working with maritime administrations, port authorities, relevant government departments and related stakeholders to facilitate compliance with MARPOL Annex VI. Valuable feedback and information were obtained from the territories of the southern sub-region.



### APRIL - DOCKS THE FUTURE CONFERENCE, GLOBAL MTCC NETWORK MEETING, STUDY VISIT AND TECHNICAL WORKSHOP

From 1 to 5 April, representatives from the five MTCCs met for a Digital Port Workshop in Trieste, Italy and during the same week presented on GMN at the DocksTheFuture International Conference.



### APRIL - MTCC-PACIFIC 8TH NATIONAL WORKSHOP

The Cook Islands Ministry of Transport, together with national ship operators, port operators and other stakeholders have called for greater initiative in energy efficient operations to reduce greenhouse gasses. The call was made at the first national workshop of this kind on Energy Efficient Operations of ships, which was delivered by MTCC-Pacific from 15 to 17 April in the Cook Islands. The three-day workshop provided participants with an understanding of the latest developments at the international level; new technologies, tools and methods available to monitor and reduce fuel oil consumption from the operations of ships in Cook Islands, in order to contribute to national efforts to reduce greenhouse emissions and nationally determined contributions.



### APRIL - MTCC-ASIA INTERNATIONAL CONFERENCE ON SHIPPING EFFICIENCY

MTCC-Asia organized the "International Conference on Ship Energy Efficiency 2019 - Technology application and practices for GHG controlling and major challenges for shipping industry" from 22 to 25 April in Shanghai, China. The Conference was attended by Mr. Octavian Stamate, Counsellor of the EU Delegation to China, Prof. Xin Shi, the Vice President of SMU and the Executive Chairman of MTCC-Asia, together with other 40 representatives from the maritime authorities, academia, and shipping industry of the region. Representatives from China Maritime Safety Administration, Wartsila Group, Antwerp Port of Belgium, Shanghai Port Group, China COSCO Shipping Group, Panama International Maritime University and other maritime countries demonstrated and exchanged the latest technology, management and practices of ship energy efficiency.



### JUNE - MTCC-AFRICA ENGAGEMENT IN AFRICAN BLUE ECONOMY FORUM (ABEF)

Between 25-26 June, the forum provided a unique platform for ocean stakeholders to share insights on how to achieve SDG 14 and present new investment opportunities while facilitating public-private partnerships and networking. MTCC-Africa was presented by the MTCC Head, Ms. Lydia Ngugi.

The MTCC-Africa Head was part of the panel discussion that touched on "ocean pollution - new tools and regulations to protect oceans health in Africa". The event opened up the activities of MTCC-Africa to the northern part of Africa.

# HIGHLIGHTS

## GMN SECOND FILM

A second GMN Film was released in May 2019 and puts the spotlight on energy efficiency measures in the port and shipping sector in the Solomon Islands, implemented with the support of the regional MTCC-Pacific.

You can watch the video on the GMN website (<https://gmn.imo.org/media-channels/>) and YouTube ([https://www.youtube.com/watch?v=5V\\_117ZNa\\_M&t=9s](https://www.youtube.com/watch?v=5V_117ZNa_M&t=9s))



## MTCC-ASIA OFFICIALLY OPERATING E-LEARNING

Taking advantage of the experience of E-learning technologies prevailing in large international enterprises and organizations, MTCC-Asia officially started to operate an E-learning course from May 2019. Using innovative and flexible learning methods, the course mainly covers the International Maritime Conventions, Ship Energy Efficiency Management and Technologies, Shipping Industry Management and Practices.

The program is mainly produced by MTCC-Asia Technical Officers and is designed for the trainees from Asian maritime countries. The first session is running for 22 trainees, mainly from Myanmar, Vietnam, Cambodia, Malaysia, India, the Philippines, Thailand and Iran.

In order to promote the development of the E-learning course, MTCC-Asia would like to recruit a new group of international qualified trainees. For more information and registration, please contact Ms. Zhu Sha ([zhusha@shmtu.edu.cn](mailto:zhusha@shmtu.edu.cn)).

## SPC - USP DISTANCE LEARNING PROGRAMMES

On 23 August 2018, the Pacific Community (SPC), host of MTCC-Pacific, and University of South Pacific (USP) signed a Memorandum of Understanding (MoU) which facilitates collaboration and enhanced synergies in delivering services to their mutual memberships.

On 4th June 2019, SPC and USP signed an Implementation Agreement (IA) which sets out objectives for the development of a Distance Learning Resource (DLR) on Energy Efficient Operations of Ships in the form of audio visuals including voice overs of the PowerPoint presentations. This IA is aligned to the purpose and scope of the SPC-USP MoU and provides the terms and conditions of the project implementation.

The project is part of the capacity building activities of the MTCC-Pacific. The project is part of the capacity building activities of MTCC-Pacific and it will promote knowledge creation on renewable energy on board vessels and foster capacity building for domestic ship operators and crews in the Pacific Island Countries with the view of reducing greenhouse gas emissions through technical and operational measures. The project will conclude in 30 June 2019. For more information, please contact Ms. Ore Toua ([oret@spc.int](mailto:oret@spc.int)).



## MTCC-PACIFIC RETROFIT IN VANUATU AND SAMOA

As part of the pilot project, MTCC-Pacific will install solar system and trial new practices of energy efficiency measures to demonstrate the savings that can be achieved through technical and operational measures. A landing craft “Tiwi Trader” in Vanuatu was chosen after the ship operator had fulfilled the prerequisite, by successfully implementing Safe Management System (SMS) which is integrated with Ship Energy Efficiency Management Plan (SEEMP). Thus ensuring a consistent approach to improving safety and reaping maximum benefit through technical and operational measure from aged vessel with inefficient designs. The baseline study was conducted using the fuel oil consumption data collected through SEEMP. Similarly, a cargo passenger vessel, “Lady Samoa III” in Samoa was selected. The installed solar panels will produce electricity which will be used to supplement the diesel generators and reduce its electric load.



Preliminary data analysis of the project in Vanuatu indicates an approximate of 32% savings in fuel cost and reduction of 101 tons of greenhouse gas emission annually. Subsequently, the Samoa inter-island ferry will save approximately 10% in fuel cost and reduce 135tons of greenhouse gas emission annually. Solar system are applicable for all ages of vessels trading in areas with sunlight and is one of the potential immediate technical measure that could be adopted by the aging fleet in the region. These projects will promote renewable energy and demonstrate the application of maritime solar energy in Pacific Island Countries and Territories with the view of reducing greenhouse gas emissions and progress low-carbon development in the Pacific maritime transport.

## UPCOMING WEBINAR ON SULPHUR CAP

The main type of “bunker” oil for ships is heavy fuel oil, derived as a residue from crude oil distillation. Crude oil contains Sulphur which, following combustion in the engine, ends up in ship emissions. Sulphur oxides (SOx) are known to be harmful to human health, causing respiratory symptoms and lung disease. In the atmosphere, SOx can lead to acid rain, which can harm crops, forests and aquatic species, and contributes to the acidification of the oceans.

From 1 January 2020, the limit for Sulphur in fuel oil used on board ships operating outside designated emission control areas will be reduced to 0.50% m/m (mass by mass). This will significantly reduce the amount of Sulphur oxides emanating from ships and should have major health and environmental benefits for the world, particularly for populations living close to ports and coasts.

GMN is organizing webinars for the MTCCs on the 2020 Sulphur Cap, which will be delivered in July and August by Dr. Edmund Hughes, Head for Air Pollution and Energy Efficiency for the Sub-Division for Protective Measures at IMO. More information will be available on the GMN website - Media Center section.

# GMN TIMELINE



# LOOKING AHEAD: JULY TO DECEMBER 2019



## MTCC-CARIBBEAN SECOND NATIONAL WORKSHOP

1 July 2019 -30 July 2019  
Port of Spain, Trinidad and Tobago



## SECOND GLOBAL GREEN MARITIME FORUM

11 July 2019  
Shanghai, China



## MTCC-PACIFIC SECOND REGIONAL WORKSHOP

16 September 2019 - 20 September 2019  
Apia, Samoa



## MTCC-ASIA 4TH NATIONAL WORKSHOP

23 September - 27 September 2019  
Mumbai, India



## MTCC-ASIA SECOND REGIONAL WORKSHOP

30 September 2019 - 2 October 2019  
Yangon, Myanmar



## MTCC-LATIN AMERICA SECOND REGIONAL WORKSHOP

Date TBC  
Location TBC



## 3RD GMN INTERNATIONAL CONFERENCE: TRENDS & CHALLENGES AFTER THE PARIS AGREEMENT & MTCCS' SUCCESS STORIES

7 October 2019 - 11 October 2019  
Malmö, Sweden



## GMN INTRODUCTION DURING COP 25

10 October 2019  
Valparaíso (Chile)



## MTCC-AFRICA SECOND REGIONAL WORKSHOP

29 October 2019 - 31 October 2019  
Port Louis, Mauritius

# CONTACT DETAILS



**MTCC AFRICA**  
Maritime Technology Cooperation Centre

mtccafrica@jkuat.ac.ke

+254 67 5870001-4

gmn.imo.org/mtcc/africa/  
<http://mtccafrica.jkuat.ac.ke/>

Jomo Kenyatta University of Agriculture and Technology, Mombasa Campus, JKUAT Main Campus, Office of the Vice Chancellor, P. O. Box 62000 – 00200 Nairobi, Juja, off Thika Superhighway, Kenya



**MTCC ASIA**  
Maritime Technology Cooperation Centre

mtcc-asia@shmtu.edu.cn

+ 86 21 38284991

gmn.imo.org/mtcc/asia/  
<http://www.mtccasia.org/>

Shanghai Maritime University, 1550, Harbor Avenue, New Harbour City, Pu Dong New District, 201306 Shanghai, China



**MTCC CARIBBEAN**  
Maritime Technology Cooperation Centre

mtcc@utt.edu.tt

+868 223 4888

gmn.imo.org/mtcc/caribbean/  
<https://utt.edu.tt/?wk=68>

The University of Trinidad and Tobago, Chaguaramas Campus, 2nd Avenue North, Western Main Road, Chaguaramas, Trinidad & Tobago W.I.



**MTCC LATIN AMERICA**  
Maritime Technology Cooperation Centre

mtcclatinamerica@umip.ac.pa

+507 314-3700

gmn.imo.org/mtcc/latin-america/  
<https://mtcclatinamerica.com/home.html>

Universidad Marítima Interamericana de Panamá, UMIP (International Maritime University of Panama), La Boca 918B, Panama, Republic of Panama



**MTCC PACIFIC**  
Maritime Technology Cooperation Centre

mtcc-pacific@spc.int

+679 337 0733

gmn.imo.org/mtcc/pacific/  
<http://mtccpacific.spc.int/>

Pacific Community (SPC) Economic Development Division Private Mail Bag, Suva, Fiji



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

gmn.imo.org

gmn@imo.org

International Maritime Organization, 4, Albert Embankment, London, SE1 7SR, United Kingdom



[www.imo.org](http://www.imo.org)

