MTCC Caribbean successfully completes the Regional Technology Demonstration and Biofouling Management Training under the IMO-Norad TEST Biofouling Project

Panama City, Panama,

8th July to 10th July 2024

The MTCC Caribbean is proud to announce the successful completion of the TEST Biofouling Regional Technology Demonstration and Training Course on Biofouling Risk Assessment and Inspection Methodologies under the IMO -NORAD TEST Biofouling Project. MTCC Caribbean collaborated with MTCC Latin America, which played a critical role in the planning and execution of the week's events. MTCC Latin America, based in Panamá at the Universidad Marítima Internacional de Panamá, (UMIP), has been instrumental in connecting MTCC Caribbean with key actors to facilitate the technology demonstration. UMIP was also the venue for the delivery of the training course, and they provided audio-visual support and assisted with logistical arrangements, for the events.

This project deliverable is a significant step forward in maritime decarbonization and environmental protection. The event featured a two-day pilot delivery of the training program on in-water inspection including biofouling risk assessment and inspection, followed by an innovative technology demonstration by HullWiper Ltd. Their ROV was effectively used to demonstrate in-water cleaning with capture technology, and provided a comprehensive and engaging session on applicability and usefulness.

Training Program Overview:

The Biofouling Risk Assessment and Inspection Methodologies training workshop included insightful sessions delivered by the Primary subject matter expert Dr. Ashley Coutts and with dedicated topic support from Dr. Gregory Ruiz and Ms. Lina Ceballos-Osuna. The training covered various critical aspects of biofouling management, providing participants with in-depth knowledge and practical skills.

Training Course on Biofouling Risk Assessment and Inspection Methodologies:

A critical component of the program was the training course on Biofouling Risk Assessment and Inspection Methodologies. This course provided participants with the tools and knowledge necessary to assess biofouling risks effectively and implement robust inspection methodologies. The course emphasized practical skills and hands-on learning, ensuring participants are well-equipped to manage biofouling challenges in their respective regions.

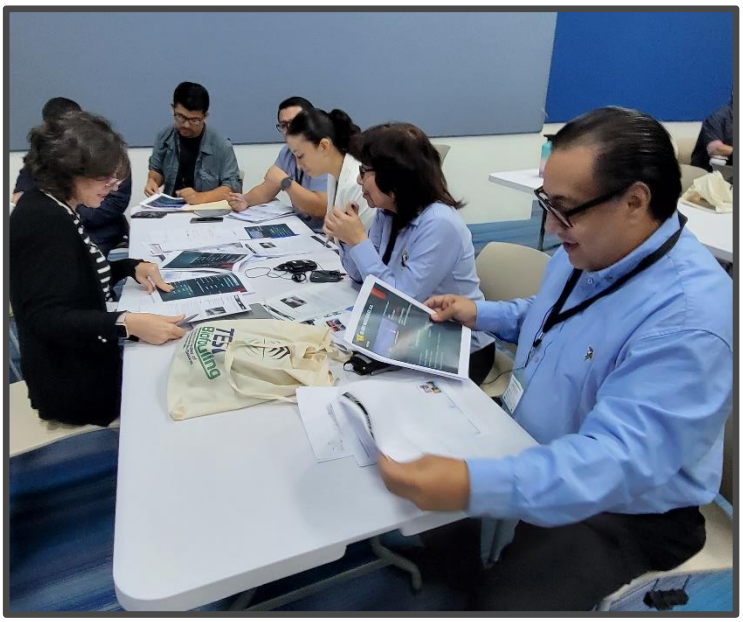
Day 1:

The program provided a detailed overview of biofouling and its environmental impacts. Presentations from Ms. Lina Ceballos-Osuna and Dr. Gregory Ruiz set the stage by discussing the global response to biofouling management and the challenges posed by invasive aquatic species. Their sessions highlighted the importance of international collaboration and proactive measures in mitigating biofouling.

(L) Dr. Asheley Coutts works with the participants throughout the Training Workshop.
(Top Right): The Participants for the Training Workshop on Day 1.
(Bottom Right): Ms. Lina Ceballos-Osuna, discusses the material being delivered with the participants.

Day 2:

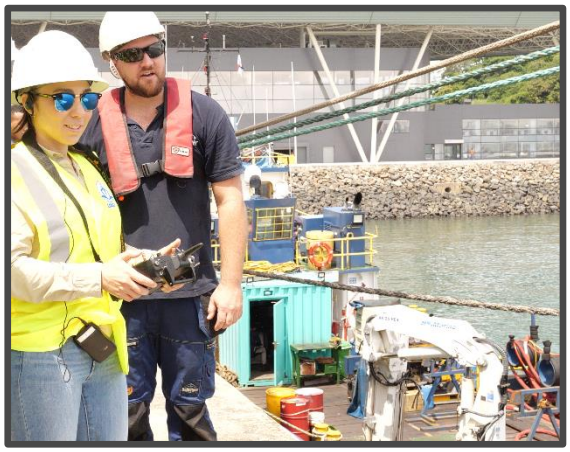
Focused on in-water inspection techniques and best practices. Participants were introduced to various inspection methodologies and tools, with practical demonstrations and hands-on training. Mr. Ashley Coutts provided invaluable insights into effective biofouling inspection strategies. Participants gained insights on technological advancements in the area of in-water hull inspections as well as challenges and opportunities for the uptake of these technologies.

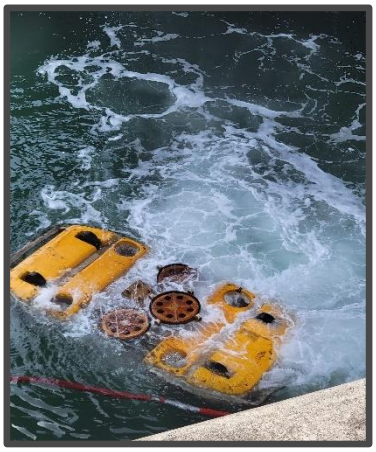


(L) Participants engaging in one of the activities during the workshop.
(R): Dr. Ashley Coutts discussing the activities with one of the groups during the workshop.

Day 3:

The highlight of the day was the technology demonstration by Hull Wiper Ltd. and the Panama based company Talleres Industriales at the Panama Cruise Terminal. Mr. John Armstrong introduced their innovative in-water cleaning with capture technology with a short Q&A session. Mr. David Jones then actively demonstrated the efficiency and effectiveness of the ROV and its appropriateness for biofouling management. Participants had the opportunity to view real-time and actively participate in the technology demonstration, whilst engaging in discussions on its practical applications.





(Top Left): The Hull Wiper representative allows a participant to use the controls for the ROV, for a more engaging demonstration.
(Top Right): The ROV in motion, with the water jets displayed.
(Bottom): The ROV is lifted and moved into the water by a hydraulic arm.

Participant Engagement:

The high levels of engagement from participants contributed significantly to the success of the program. Their active involvement fostered much-needed discussions to advance best practices and technology uptake in biofouling management. Participants expressed great interest in finding the next steps and key examples for introducing policies related to biofouling management. The positive feedback highlighted their satisfaction with the content and delivery of the training, noting it as a valuable experience they would highly recommend.

Day three of the training involved the participants, Members of the Hull Wiper and Talleres Industrial team, the MTCC Caribbean and the IMO TEST Biofouling PCU unit.

Collaborative Partnerships and Regional Influence:

This event also marked the MTCC Caribbean's newfound collaborative partnerships, as we continue to gain influence in the Latin American region. The close relationships between Latin America and the Caribbean in terms of trade and development underscore the necessity of such collaborations. We are grateful to our participants for their active involvement, which has been crucial in driving forward these important discussions.

The MTCC Caribbean, MTCC Latin America and the IMO TEST Biofouling PCU, collaborated for the event. From L-R (Top): Chief Engineer Ervin Vargas Wilson- Technical Director/ Professor UMIP, Javier Diaz -Technical Officer MTCC LA/ Faculty Lecturer UMIP, Nathanael Davis Project Officer MTCC Caribbean, Michael Razack Project Manager MTCC Caribbean.
From L-R Bottom: Ms. Aricel Araúz Administrative Coordinator-MTCC LA, Mrs. Vivian Rambarath-Parasram- Director and Head MTCC Caribbean, Suzette Balkaran-Energy Efficiency Advisor MTCC Caribbean and Sarita Emmanuel-Project Officer MTCC Caribbean.

Gratitude and Acknowledgments:

We would like to extend our heartfelt gratitude to the International Maritime Organization (IMO) and our partners from the TEST Biofouling PCU and GloFouling team for entrusting MTCC Caribbean with this critical task. The outcomes of the IMO-NORAD TEST Biofouling project have been instrumental in shaping this training program and its successful execution.We also thank all our collaborators: MTCC Latin America, UMIP, VT Shipping, Talleres Industriales, HullWiper Ltd, Panamá Cruise Terminal, Panamá Maritime Authority (PMA) and the Panamá Canal Authority (PCA), for their unwavering support and contributions.

The members of MTCC Latin America and the Universidad Marítima Internacional de Panamá, (UMIP) display tokens of appreciation courtesy the MTCC Caribbean and UTT (The University of Trinidad and Tobago).
From L-R: Javier Diaz -Technical Officer MTCC LA/ Faculty Lecturer UMIP, Ms. Aricel Araúz Administrative Coordinator-MTCC LA, Mr. Victor Luna Barahona- President UMIP and Chief Engineer Ervin Vargas Wilson- Technical Director/ Professor UMIP.

The members of MTCC Caribbean, MTCC Latin America, IMO TEST Biofouling PCU, Talleres Industriales and the Panama Cruise Terminal collaborate on the logistics for the demonstration activity on Day 3.