



Preventing the transfer of Invasive Aquatic Species via ships' biofouling

# Fouling Focus

8-12<sup>TH</sup> JULY 2024



## PROGRAMME AGENDA

July 8<sup>TH</sup> - 9<sup>TH</sup>



TRAINING COURSE ON BIOFOULING RISK ASSESSMENT AND INSPECTION METHODOLOGIES

July 10<sup>TH</sup>



TECHNOLOGY DEMONSTRATION IN-WATER CLEANING

July 11<sup>TH</sup> - 12<sup>TH</sup>



BIOFOULING MANAGEMENT WORKSHOP FOR LATIN AMERICA AND CARIBBEAN WOMEN IN MARITIME

**Monday 8th - 9th July**

**TRAINING COURSE ON  
BIOFOULING RISK ASSESSMENT AND INSPECTION  
METHODOLOGIES**

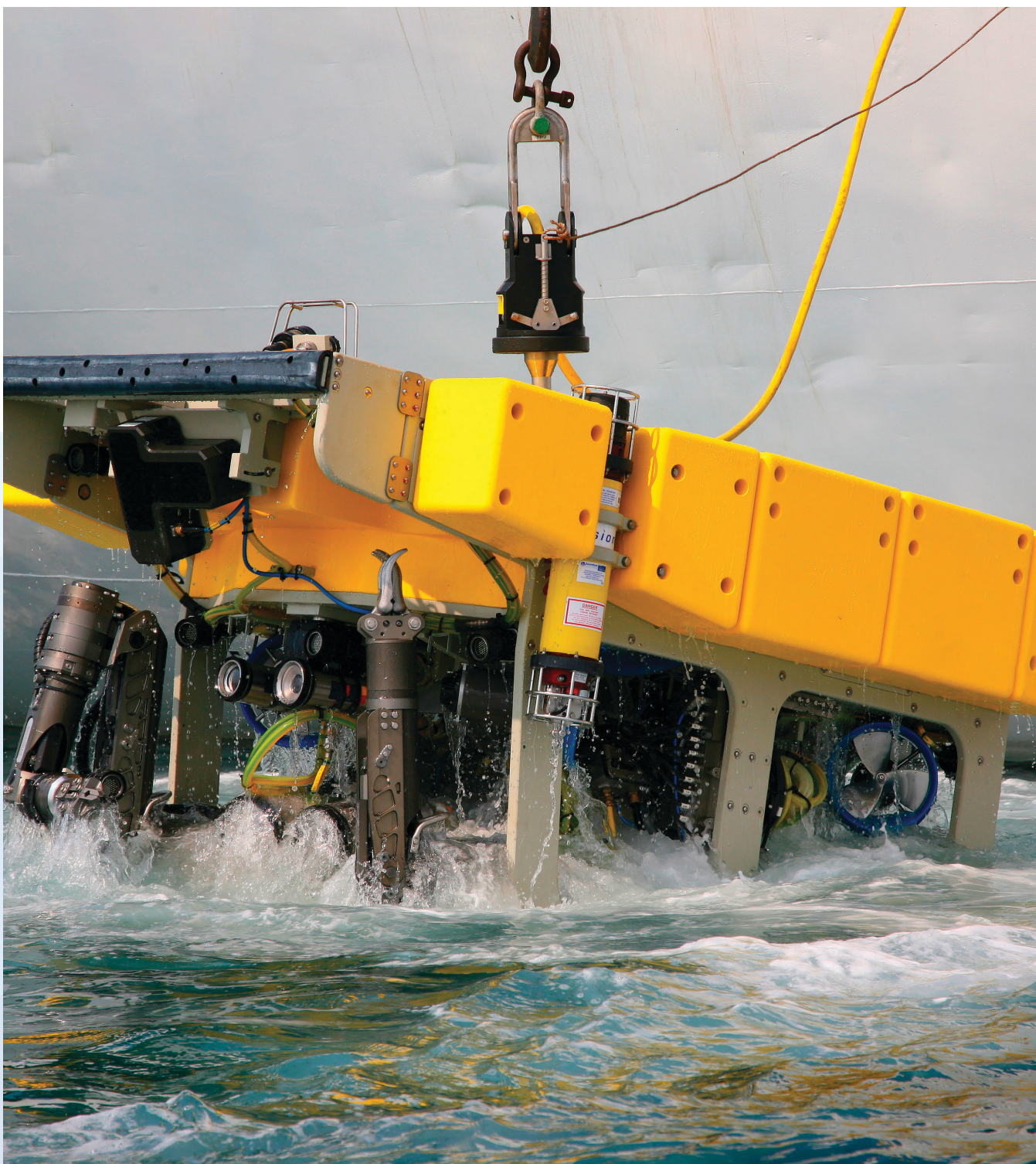


Photo (technology)

# DAY 1 **Monday 8th July**

08:30 - 9:00 **REGISTRATION**

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09:00 - 9:30 **OPENING AND WELCOME REMARKS**

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- **Lilia Khodjet El Khil**  
Project Technical Manager, GloFouling Partnerships project, IMO
- **MTCC Latin America**  
Chief Ervin Vargas. Director
- **MTCC Caribbean**  
Mrs. Vivian Rambarath-Parasram, Director and Head
- **Universidad Maritima Internacional de Panamá**
- **The Panama Maritime Authority and/or Ministry of Maritime Affairs**

09:30 - 09:45 **INTRODUCTION TO THE COURSE PROGRAMME AND OBJECTIVES OF THE TRAINING COURSE**

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09:45 - 10:40 **TRAINING COURSE MODULE 1 Introduction (part 1)**

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Understanding and addressing the spread of Invasive Aquatic Species (IAS).

**Presenter:**

**Mr. Ashley Coutts**  
Director, Biofouling Solutions Pty. Ltd

10:40 - 11:00



**COFFEE BREAK AND GROUP PHOTO**

11:00 - 11:30 **TRAINING COURSE MODULE 1 Introduction (part 2)**

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Effective Biofouling Management Strategies and International Guidelines

**Presenter:**

**Ms. Lina Ceballos**  
California State

11:30 - 12:30 **TRAINING COURSE MODULE 2 In-Water Inspections**

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Types and Purposes of In-Water Inspections (part 1)  
Methods for Undertaking In-Water Inspections (part 2)

**Presenter:**

**Mr. Ashley Coutts**  
Director, Biofouling Solutions Pty. Ltd



12:30 - 13:30



13:30 - 15:00

**TRAINING COURSE MODULE 3** Factors influencing biofouling accumulation and predictive measures for inspection and cleaning**Presenter:****Gregory Ruiz**

Principal Investigator and Senior Scientist, Smithsonian Environmental Research Centre (SERC)

15:00 - 15:15



COFFEE BREAK

15:15 - 16:30

**TRAINING COURSE MODULE 4** Effective planning and execution of in-water inspections**Presenter:****Mr. Ashley Coutts**

Director, Biofouling Solutions Pty. Ltd

16:30 - 16:40

**SUMMARY AND CONCLUSION****CLOSE Day 1**



## DAY 2 Tuesday 9th July

09:00 - 9:10

### RECAP OF DAY 1 AND INTRODUCTION OF DAY 2

09:10 - 10:40

### TRAINING COURSE MODULE 5

#### Conducting In-Water Inspections: Best Practices and Challenges

**Presenter:**

**Mr. Ashley Coutts**

Director, Biofouling Solutions Pty. Ltd

10:40 - 11:00



COFFEE BREAK

11:00 - 11:30

### TRAINING COURSE MODULE 5

#### Conducting In-Water Inspections: Best Practices and Challenges (cont.)

**Presenter:**

**Mr. Ashley Coutts, Director**

Biofouling Solutions Pty. Ltd

11:30 - 13:00

### TRAINING COURSE MODULE 6

#### In-water Inspection Reporting Requirements

**Presenters:**

**Mr. Ashley Coutts, Director**

Biofouling Solutions Pty. Ltd

13:00 - 14:00



LUNCH

14:00 - 14:30

### EVALUATION AND FEEDBACK OF THE COURSE

14:30 - 14:45

### CLOSURE OF THE COURSE AND CLOSING REMARKS

**Speaker:**

**Lilia Khodjet El Khil**

Project Technical Manager, GloFouling Partnerships project, IMO



15:00 - 18:00

**SITE VISIT CASCO VIEJO, OLD PANAMA CITY**





## DAY 3 **Wednesday 10th July**

08:30 - 9:30

**ASSEMBLY AT UMIP FOR REGISTRATION AND TRANSPORTATION TO DEMONSTRATION SITE**

09:30 - 10:00

**BRIEFING SESSION TO ALL PARTICIPANTS**

10:00 - 10:15

**TRANSIT TO DEMONSTRATION SITE**

# Demonstration site visit

## **PORT OF BALBOA**

### WEDNESDAY 10 JULY 2024, 10:00AM



(for information refer to Aide Memoir)



10:15 - 17:00

**IN-WATER CLEANING TECHNOLOGY OPERATIONS**  
**Brief Overview of Technologies**

- **Greensea IQ**
- **HullWiper Ltd**

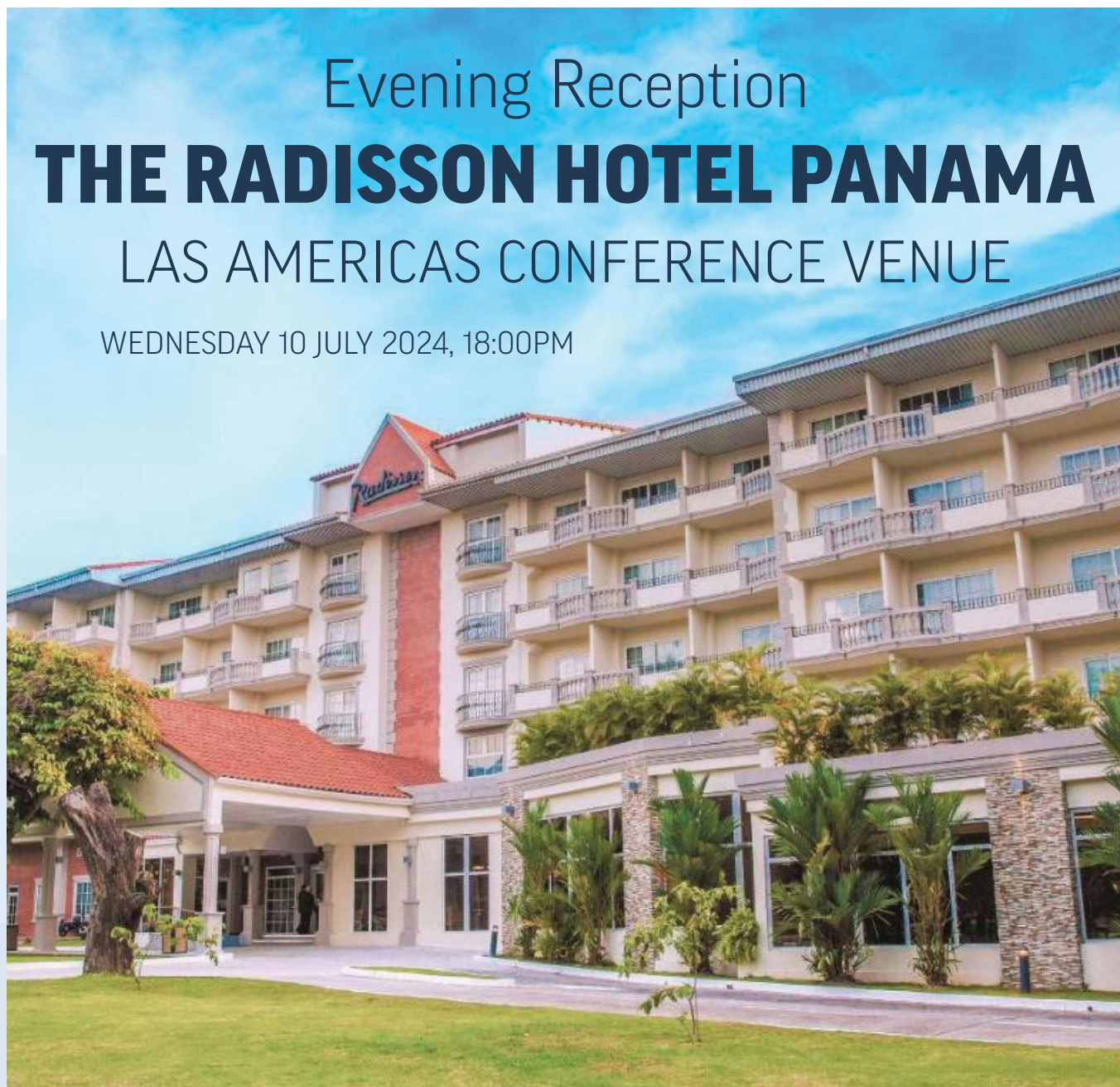
12:30 - 13:30



17:00 - 17:30

**RETURN TO RADISSON HOTEL**

18:00

**EVENING RECEPTION**

(for information refer to Aide Memoir)

# PROGRAMME

## LATIN AMERICA AND CARIBBEAN WOMEN IN MARITIME - BIOFOULING MANAGEMENT WORKSHOP (LACWIM-BMW)

**11-12 JULY 2024**

INTERNATIONAL MARITIME UNIVERSITY OF PANAMA  
(UMIP), PANAMA CITY, PANAMA



(for information refer to Aide Memoir)



# WORKSHOP Day 01

08:30 - 9:00 **REGISTRATION & COFFEE**

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09:00 - 9:20 **OPENING SESSION**

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**Master of ceremony**

**Angelica Borja**

Corporación Universitaria Reformada

Special message

**Secretary General of International Maritime Organization** (recorded video)

Welcome address - Keynote speaker

**Maritime Authority Panama**

**Eng. Essam M Alammari**

Deputy for Maritime Transport, Transport General Authority, Kingdom of Saudi Arabia

**Lilia Khodjet El Khil**

Project Technical Manager, GloFouling Partnerships project, Sub-Division for Partnerships and Projects, International Maritime Organization (IMO)

09:20 - 9:30 **SPECIAL PRESENTATION**

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**Estela Luck, Deputy Chief Sustainability Officer**

Panama Canal Authority

09:30 - 9:35 **GROUP-PHOTO**

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09:40 - 10:20 **PRESENTATION THE IMO AND GENDER EQUALITY**

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An introduction to the International Maritime Organization (IMO) work on gender equality.

Women in the maritime industry are being historically underrepresented however the IMO has taken a strategic approach to help ocean's stakeholders to achieve gender equality and empower all women and girls. The presentations will explain what IMO is doing to address the gender gap and how IMO's Technical Cooperation and Implementation Division includes gender in its activities to engage and empower more women.

**Facilitator:**

**Angelica Borja**

**Presenters:**

- **Mariana Noceti**  
Principal Programme Assistant for the Women in Maritime Programme, Technical Cooperation and Implementation Division, IMO
- **Nicole Wickham**  
President, WiMAC Jamaica Chapter
- **Tosca Pinas**  
Chair, WiMAC Suriname Chapter
- **Katherine Caro Canales**  
Head, Maritime Interests Department, Chilean Navy and MaMLA representative
- **Karine Langlois**  
Social Media and Communications Officer, Outreach and Communication Office, IMO
- **Lilia Khodjet El Khil**  
Project Technical Manager, GloFouling Partnerships project, IMO

**Q & A**



10:20 - 10:30

## PRESENTATION GEF-UNDP-IMO GLOFOULING PARTNERSHIPS AND IMO-NORAD TEST BIOFOULING PROJECTS

An overview of the projects:

The IMO's strategic approach to biofouling management emphasizes the importance of collaboration, capacity building, and awareness-raising to support developing countries in implementing effective biofouling management in accordance with the IMO Biofouling Guidelines. The project's donors, the Global Environment Facility (GEF) and Norwegian Agency for Development Cooperation (Norad) joined forces to address challenges through legal, policy and institutional reforms, capacity-building and environmentally sound technologies.

**Facilitator:**

**Angelica Borja**

**Presenter:**

**Lilia Khodjet El Khil**

Project Technical Manager, GloFouling Partnerships project, IMO

**Q & A**

10:30 - 11:00

## SESSION 1 ENVIRONMENTAL IMPACTS OF SHIPS' BIOFOULING

**What is biofouling and how does it contribute to the loss of marine biodiversity and to climate change?**

Ships' biofouling is one of the main vectors for the introduction of IAS, which is considered to be one of the greatest threats to the world's marine biodiversity. Biofouling on ships' hull also increases the ships' drag. To maintain speed, ships must burn more fuel, thus increasing greenhouse gas emissions (GHG). This session will highlight the impacts of biofouling and environmental challenges

**Facilitator:**

**Ms. Angelica Borja**

**Presenters:**

- **Lina Cabellos-Osuna**  
Senior Environmental Scientist, California State Lands Commission
- **Inti Keith**  
Principal Investigator, Marine Biodiversity Research, Charles Darwin Foundation (Galapagos)

**Panelists:**

- **Ervin Vargas Wilson**  
Technical Director, Maritime Technology Cooperation Centre (MTCC) of Latin America
- **Sharloth Fernandez**  
Head of the Environmental Management Department, National Directorate of Aquatic Spaces (DIRNEA), Maritime Authority of Ecuador
- **Carmen Schoedler**  
Research Manager at Smithsonian Tropical Research Institute (SERC)

**Q & A**

11:00 - 11:30

**SESSION 2 THE GLOBAL RESPONSE**

**How does the IMO global policy address biofouling related issues?**

More countries are taking steps to tackle biofouling from ships, in line with the IMO's 2023 Guidelines for the Control and Management of Ships' Biofouling to minimize the transfer of Invasive Aquatic Species (IMO Biofouling Guidelines). The objective of this panel is to explain IMO's policy and how it is being implemented by Member States and other stakeholders.

**Facilitator:**  
**Angelica Borja**

**Presenter:**  
**Elda Kazara-Belja, Senior Lecturer**  
Head of Administration, International Maritime Law Institute (IMLI)

**Panelists:**

- **Lilia Khodjet El Khil**  
Project Technical Manager, GloFouling Partnerships project, IMO
- **Maria Cecilia Trindade de Castro**  
Oceanographer, Diretoria de Portos e Costas, Brazil
- **Gregory Ruiz**  
The Coastal Ocean Marine Biosecurity International Network of the Americas (COMBINA)

**Q & A**

11:30 - 11:45



**COFFEE BREAK**

11:45 - 12:15

**SESSION 3 TECHNOLOGY DEVELOPMENT AND INNOVATION**

**How can technological innovation and development contribute to managing ship's biofouling and control the spread of IAS?**

Various antifouling systems, such as coating, painting and surface treatment, biofouling monitoring systems such as inspection, in-water cleaning, Research and Development are among mitigating measures. Panelists will discuss some of these effective approaches.

**Facilitator:**  
**Angelica Borja**

**Presentation:**  
**Michael Razack**  
Technical Officer, MTCC Caribbean; and

**Sarita Emmanuel**  
Project Officer, MTCC Caribbean

**Panelists:**

- **Abigail Robinson**  
Vice President of Sustainability, ECOsubsea AS
- **John Dunn**  
Chief Operating Officer, GreenSea IQ
- **John Armstrong**  
Managing Director, HullWiper Ltd
- **Ashley Coutts**  
Managing Director and Principal Scientist, Biofouling Solutions Pty Ltd.

**Q & A**

12:15 - 13:30



13:30 - 14:00

## SESSION 4 INDUSTRY PERSPECTIVES

### Challenges and best practices: What role does the private sector play in promoting biofouling management?

Ships' biofouling is an issue that concerns different stakeholders including the private sector. This session will discuss common challenges and best practices, opportunities, and solutions to reduce the impact of biofouling and find ways to contribute to a sustainable blue economy.

#### Facilitator:

**Angelica Borja**

#### Presentation:

**Simon Doran**

Chair, Global Industry Alliance (GIA) for Marine Biosafety

#### Panelists:

- **Guadalupe Concepcion**  
CARPAC HUB Manager & AMR Business Compliance Ambassador, MAERSK
- **Inter-American Development Bank (tbc)**
- **Aneth Pitterson**  
SHEQ Manager, VT Shipping International

Q &amp; A

14:00 - 14:30

## SESSION 5 BIOFOULING GENDER ACTION PLAN AND ANALYSIS REPORTS

### An introduction to the Gender Action Plan

IMO's TEST Biofouling project has developed an action plan specifically to address gender disparity in biofouling management sector. The presentation will outline the objectives and highlight ways to help increase gender diversity and inclusion in the maritime industry.

#### Facilitator:

**Angelica Borja**

#### Presenters:

- **Sanjam Gupta**  
Founder, Maritime SheEO
- **Tevita Robanakadavu**  
Director, Pacific Centre for Maritime Studies, Fiji National University

#### Panelists:

- **Reza Ludovic**  
Technical Advisor, Research, Prospective and Development, Agence Portuaire, Maritime et Fluviale, Madagascar
- **Marija Vranic**  
Project Coordinator, TEST Biofouling, IMO

Q &amp; A



14:30 - 15:30

## PAVING THE WAY FOR DAY 2 WORKSHOPS

The objective of this session is to highlight some existing noteworthy initiatives which women from the Latin America and Caribbean countries could benefit from and will serve as reference information ahead of the group discussion workshops of Day 2

### Facilitator:

**Lilia Khodjet El Khil**

Project Technical Manager, GloFouling Partnerships project, IMO

### Presentations:

- **International Maritime University of Panama**  
How education leads to empowering women and young girls in science
- **WISTA**  
Introduction to the associations and how networking is important for professional development and progression in the industry
- **WMU**  
E-Learning training courses to support women in maritime
- **IMLI**  
Programmes and initiatives to support female lawyers through sponsorships
- **Sanjam Gupta**  
Founder, Maritime SheEO Leadership programme

### Q & A

## REGISTRATION OF PARTICIPANTS IN WORKSHOP GROUPS ON DAY 2.

## CLOSE Day 1

# WORKSHOP **Day 2**

08:30 - 9:00 **WELCOME COFFEE**

09:00 - 9:15 **OPENING SESSION**

**Facilitator:**

**Lilia Khodjet El Khil,**

Project Technical Manager, GloFouling Partnerships project, IMO

09:15 - 12:30 **EMPOWERING WOMEN LEADERS Strategies for Success**

(six break out groups)

**Facilitator:**

**Sanjam Gupta**

**Co-Facilitator:**

**Angelica Borja**

**9:15 - 10:15 Session 1 BUILD YOUR NETWORK**

- Build a collaborative relationship with your manager
- Build a network beyond your team

**10:15 - 11:15 Session 2 BUILD YOUR VISIBILITY**

- Reframe self promotion
- Promote achievements through anecdotes
- Engage on the internal and external platforms
- Leverage reverse promotion

11:15 - 11:30



**COFFEE BREAK**

### 11:30 - 12:30 Session 3 **MANAGE YOUR PERSONAL BRAND**

Four Dimensions of Personal Brand

- Wrapping
- Connect
- Visibility
- Substance

12:30 - 13:30



### 13:30 - 14:30 Session 4 **WOMEN ON BOARD**

#### How to sustain women's contribution in the maritime sector?

The objective of this session is to re-cap the findings of the group sessions, identify gaps and next steps to increase opportunities for women in biofouling management.

#### Facilitator:

**Sanjam Gupta**

Sanjam Gupta, Maritime SheEO

Open discussion

**SUMMARY AND CONCLUSION**

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### 14:30 - 14:45 CLOSING OF THE WORKSHOP

Closing remarks

**Víctor Luna Barahona**

President, International Maritime University of Panama

**Lilia Khodjet El Khil**

Project Technical Manager, GloFouling Partnerships project, IMO



**15:00 - 18:00 AFTERNOON SITE VISIT PANAMA CANAL**



(for information refer to Aide Memoir)



## Projects



Preventing the transfer of Invasive Aquatic Species via ships' biofouling

Implementing Partners

Implementing Partner



Donors