

# Advanced Education Opportunities at the Sasakawa Global Ocean Institute of the World Maritime University

World Maritime University established within the framework of the International Maritime Organization (IMO), a Specialized Agency of the United Nations

*For the Webinar on “Port and Maritime Advanced Education Opportunities”, March 2024*



**Presented by:**  
**Aspasia Pastra**

Assistant Professor,  
Sasakawa Global Ocean Institute,  
World Maritime University (WMU)  
Malmö, Sweden



# Overview

## Part 1 - About World Maritime University

- a. Mission and Vision
- b. Educational Programme
- c. Research and Capacity Building



## Part 2 - About WMU-Sasakawa Global Ocean Institute

- a. Research Programmes
- b. Publications and Reports
- c. Activities and Outreach

# Who we are - Part of the UN Family

1958



1983



2018

WMU-Sasakawa Global Ocean Institute



# About WMU

## WMU at a glance

- Post-graduate University
- Established by IMO in 1983
- Focus on Maritime & Oceans  
Education, Research & Capacity-  
Building

More at [wmu.se/about](https://wmu.se/about):



## Principal Financial Supporters

- The government of Sweden, Canada  
and Germany
- The City of Malmö
- The Nippon Foundation, Japan





# WMU Mission

To be the World Centre of  
excellence in postgraduate  
maritime and oceans  
education, professional  
training and research, while  
building global capacity and  
promoting sustainable  
development



Contribution. Development. Impact.

WMU-Sasakawa Global Ocean Institute

# President, Faculty and Staff

**Professor Maximo Q. Mejia, Jr**  
President, World Maritime University



**80+** in-house faculty and staff from **30+** countries

**110+** visiting professors and lecturers

**6087 alumni** from **170** countries



# Educational Programmes

## WMU offers:

- PhD in Maritime Affairs (Malmö)
- MSc in Maritime Affairs (Malmö)
- MSc in Maritime Affairs (Shanghai)
- MSc in Maritime Affairs (Dalian)
- MPhil in International Maritime Law and Ocean Policy
- Distance Learning
- English & Study Skills (ESSP)
- Education for Professional Excellence (EPEX)
- Summer Academy
- EPDCs



WMU offers a postgraduate programme in Maritime Affairs, leading to a Master of Science or a Postgraduate Diploma, in 7 specializations.



WMU's PhD programme offers students the opportunity to carry out research across the maritime field, but with an emphasis on issues related to the International Maritime Organization's mission of maritime safety, security and marine environmental protection.



The Master of Science in Maritime Affairs, with a specialization in International Transport and Logistics (Shipping & Finance), is delivered in Shanghai, China by WMU in collaboration with Shanghai Maritime University (SMU).



The Master of Science in Maritime Affairs, with a specialization in Maritime Safety and Environmental Management, is delivered in Dalian, China, by WMU in collaboration with Dalian Maritime University (DMU).



The innovative MPhil programme has been designed in partnership by IMO's two sister institutions, WMU and the IMO International Maritime Law Institute (IMLI) in Malta.



This long-established programme was developed for professionals in the marine insurance industry, and offers a solid academic foundation for practitioners to develop their expertise and their careers.



Industry and governments around the world are engaged in the international effort to battle climate change, greenhouse gas emissions, air pollutants, sea-level rise and weather-pattern changes.



WMU offers two International Maritime Law programmes, an LLM and a Postgraduate Diploma, in partnership with Lloyd's Maritime Academy.



The programme is delivered in association with DNV, the world's largest ship and offshore classification society.

# MSc Programme - MSc Maritime Affairs

The standard MSc programme taught in **Malmö** is **14 months** long,  
Starts in **August/September** and is divided into three terms:



## Term 1



### Foundation Studies

This initial semester provides a thorough **grounding in maritime policy** and the IMO system for **maritime governance**, as well as an introduction to the **environmental, economic, and managerial** aspects of the **ocean**.

## Term 2



### Specializations

1. Port Management
2. Maritime Education & Training
3. Shipping Management & Logistics
4. Maritime Law & Policy
5. Maritime Safety & Environmental Administration
6. Maritime Energy Management
7. **Ocean Sustainability, Governance & Management**

## Term 3



### Dissertation & Graduation

all students complete a **dissertation**, which may be based on a particular issue relating to their work in their home country or on a current or emerging maritime / ocean issue.

**Graduation** is thereafter in October in Malmö





# GOI Teaching and Supervision



## MSc in Maritime Affairs

Ocean Sustainability, Governance and Management (OSGM) specialisation

### GOI Delivers / Convenes the following modules:

- **OCE 110** - Global Ocean Governance, Multilateral Diplomacy & Negotiation (8 EC)
- **OCE 108** - Governing Human Activities that Affect the Ocean (8 EC)
- **OCE 113** - Cross-disciplinary Tools for Ocean Sustainability, Governance & Management (8 EC)



[WMU Academic Handbook 2024](#)

## PhD in Maritime Affairs

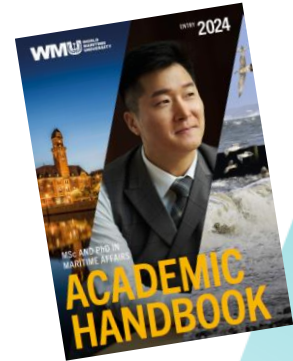
The Ph.D. taught courses consist of the mandatory Research Methods course (20 EC) and elective courses totalling 40 EC.

### Established courses

- **PHD 101** - Research Methods
- **PHD 102** - Generic knowledge and skills (Portfolio)

### Electives

- **PHD 206** – Academic Writing for Publication
- **PHD 209** – Resources Efficiency: From Linear to Circular Economy
- **PHD 210** – Statistics for Social Sciences
- **PHD 212** – Advanced Business Statistics
- **PHD 213** – Advanced Business Analytics
- **PHD 215** – Ocean Governance and Contemporary Issues
- **PHD 216** – Intro to Action Research in the Maritime & Ocean Domains



*Making a Difference:*

## Achievements of the Sasakawa Global Ocean Institute of the World Maritime University

Website: [www.wmu.se/goi](http://www.wmu.se/goi)

Contact: [goisecretariat@wmu.se](mailto:goisecretariat@wmu.se)



# Background



## May 2018 WMU Global Ocean Conference

Press release and images here:

[WMU Global Ocean Conference](#)



## May 2018 WMU-Sasakawa Global Ocean Institute Inauguration

Press release and images here:

[Inauguration WMU-Sasakawa Institute](#)



# Mission of GOI...

....to be the independent **focal point for the ocean science-policy-law-industry interface** acting as convener and convergence point where policy makers, the scientific community, regulators, industry actors and academics, representatives of civil society, **meet to discuss how best to manage and use ocean spaces and their resources for the sustainable development** of present and future generations, based on **evidence-based research, education and capacity-building**

*"Developing Ocean Governance Leaders & Building Transformative Partnerships That Make a Difference Worldwide"*

6 year anniversary on 8 May 2024

<https://wmu.se/goi>



**WMU** WORLD MARITIME UNIVERSITY  
Contribution. Development. Impact.  
WMU-Sasakawa Global Ocean Institute



# The Team: WMU-Sasakawa Global Ocean Institute



**Professor Ronán Long**  
Director



**Dr Zhen Sun**  
Associate Professor



**Dr Tafsir Johansson**  
Assistant Professor



**Dr Aleke Stöfen-O'Brien**  
Assistant Professor



**Dr Aspasia Pastra**  
Assistant Professor



**Dr. Rían Derrig**  
*PostDoctoral fellow*



**Elnaz Barjandi**  
Programme & Operations  
Manager



**Flavia Destro**  
Senior Administrative  
Assistant



**Jasmina Dervisevic**  
Secretary



**Mercedes Troisi Allende**  
Project & Operations Assistant



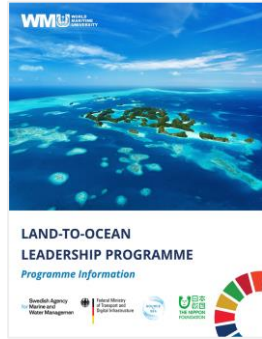
**Dorothee Seybold**  
Project & Research Fellow



**José Manuel Pacheco Castillo**  
Project & Research Fellow

# GOI Programmes and Projects 2018 - 2024

<http://land-to-ocean.wmu.se/>



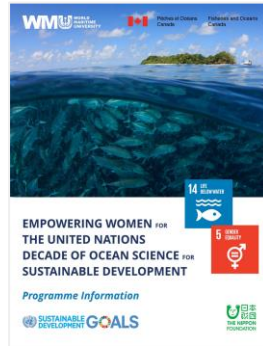
## Land-to-Ocean Leadership Programme

*Concluded December 2022*

PI and Co-Pi



<https://empoweringwomen.wmu.se/>



## Empowering Women for the UN Decade of Ocean Science for Sustainable Development

PI and Co-Pi



<https://www.bugwright2.eu/>

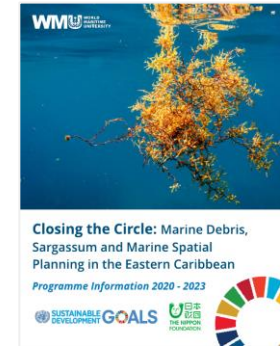


## European Union Horizon 2020 BUGWRIGHT2 project

PI and Co-Pi



<http://closing-the-circle.wmu.se/>



## Closing the Circle: Marine Debris, Sargassum & Marine Spatial Planning in the Eastern Caribbean

PI



# CLOSING THE CIRCLE PROGRAMME;

## Marine Debris, Sargassum and Marine Spatial Planning (MSP) in the Eastern Caribbean

Website: <https://closing-the-circle.wmu.se/>

Sponsored by:

Programme is hosted at the World Maritime University (WMU) - Sasakawa Global Ocean Institute, Sweden via generous funding by The Nippon Foundation the "The Closing the Circle Marine Debris, Sargassum and Marine Spatial Planning (MSP) in the Eastern Caribbean" Programme.



# Closing the Circle Programme

## Objective and Scope

Exploring challenges and advancing potential solutions to **marine debris** and **Sargassum** threats in Small Island Developing States with a particular focus on the Eastern Caribbean region. **Marine Spatial Planning (MSP)** serves as a cross-cutting theme.



## Research team



Dr. Kristal Ambrose  
PhD Graduate  
2023



Dr. Kristie Alleyne  
PhD Graduate  
2023



Dr. Roxanne Graham  
PhD Graduate  
2023



Dr. Tricia Lovell  
PhD Graduate  
2023



Sarah Mahadeo  
Research Fellow





# Key Programme Accomplishments - Processes

## Contribution to Key International Processes



### World Ocean Assessment I & II

**Contribution:**  
Co-Convenor Chapter 12 on  
Marine Litter and Dumping



### International Treaty on Plastics in the Marine Environment

**Contribution:**  
Participating in the negotiations  
towards an International Plastic Treaty



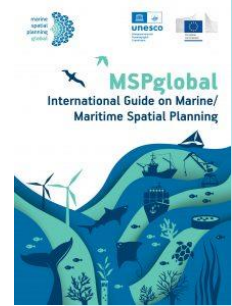
### Plastics Management Index by The Economist (supported by the Nippon Foundation)

**Contribution:**  
To serve as advisor to a working  
group to develop the indicators  
and to develop the corresponding  
reports



### IMO GESAMP Working Group on Microplastics Since 2021

**Contribution:**  
Expert input to the Working Group



### International Guide on Marine Spatial Planning (MSP)

by IOC-UNESCO  
**Contribution:**  
Expert input to MSP Global  
guide drafting

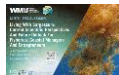
# Key Programme Accomplishments - Events

The team has been active in sharing the research in various fora's, internationally, regionally and locally:



## Conferences & Workshops

1. High level Regional Conference in Dominica, April 2022
1. MSP Training Workshop with OECS in St. Lucia, April 2023
2. GCFI75 - Special Session on Sargassum, Nov 2022
3. Socio Economic Assessment Workshop, Malmö 2021



## Side events & Posters

1. UN Ocean Conference 2022, June, Lisbon, Portugal
2. 7th International Marine Debris Conference Sept 2022, Busan, Republic of Korea
3. 3rd International Conference on Marine Spatial Planning, Nov 2023, Barcelona, Spain
4. UNEA Plastics Pollution 2023



## Webinars

More than 10 hosted, a few from Series:

1. "Tackling marine plastic pollution in the Caribbean".  
By: Mr. Joao Sousa, IUCCN
2. "Integrated Approaches to Management of Marine Litter and the Sargassum influx in the Wider Caribbean Region".  
By, Mr. Christopher Corbin and Ms. Ileana Lopez, UNEP
3. "Lessons Learnt from the BBNJ Negotiations Towards a Potential New International Plastic Treaty: A Perspective of Equity".  
By, Dr. Harriet Harden Davies and Dr. Kahlil Hassanali



# Key Programme Accomplishments - Publications



## Published outputs 2020 to 2024

15

Publications

### A few outputs from the team

Kristie Alleyne et. al. (2023). **An analysis of arsenic concentrations associated with sargassum influx events in Barbados**, Marine Pollution Bulletin, Volume 192, doi: <https://doi.org/10.1016/j.marpolbul.2023.115064>

Stöfen-O'Brien, A., Kristene Ambrose, K., S.T. Alleyne, K., Allison Lovell, T., E.D. Graham, R. (2022). Parachute science through a regional lens: Marine litter research in the Caribbean Small Island Developing States and the challenge of extra-regional research, Marine Pollution Bulletin, 174. <https://doi.org/10.1016/j.marpolbul.2021.113291>

Kristal Ambrose (2023), **Spatial assessment of micro and meso plastic concentrations on beaches in South Eleuthera, Bahamas: Identifying research limitations and standards needed to support microplastic monitoring on WCR beaches**, Marine Pollution Bulletin, Volume 193 <https://doi.org/10.1016/j.marpolbul.2023.115140>

Aleke Stöfen-O'Brien (2023), **The Second Session of the Intergovernmental Negotiating Committee to Develop an International Legally Binding Instrument on Plastic Pollution, Including the Marine Environment**, International Journal for Marine and Coastal Law, Volume 28, pp. 1-12, doi: <https://doi.org/10.1163/15718085-bja10153>

Tricia Lovell. (2023) **Managing Abandoned, Lost and Otherwise Discarded Fishing Gear (Derelict Gear) in Eastern Caribbean Small Scale Fisheries: An Assessment of Legislative, Regulatory and Policy Gaps**. Marine Policy, 148, 2023. D.O.I.: <https://doi.org/10.1016/j.marpol.2022.105432>

Sarah Mahadeo, et. al. (2022). **Challenges and Enablers to Integrate Land-Sea-Interactions in Cross-Border Marine and Coastal Planning: Experiences from the Pan Baltic Scope Collaboration**. Planning Practice & Research, 37(3), 333-354. <https://doi.org/10.1080/02697459.2022.2074112>

Roxanne Graham. (2023). **The marine litter issue in the Windward Islands - a pathway to responses using the DPSIR framework**. Frontiers in Environmental Science, 11, doi: <https://doi.org/10.3389/fenvs.2023.1150722>

Aleke Stöfen-O'Brien, Doelle, A. J., & Del Savio, L (2022). **Cities and Sustainable Ocean Governance: A Neglected Link**, The International Journal of Marine and Coastal Law, doi: <https://doi.org/10.1163/15718085-bja10102>

### Click the QR codes

*below for further information and material on the Closing the Circle Programme:*

#### Full List of Publications

Peer-reviewed articles in international journals from programme team.



#### Programme Outputs

Up to 2022 Brochure with information on the Programme efforts and key outputs to date



<http://closing-the-circle.wmu.se/>



# European Union H2020 BUGWRIGHT2 Project

*Overcoming Regulatory Barriers for Service Robotics in an Ocean Industry Context*



**Professor Ronán Long**  
Principal Investigator  
Director of GOI



**Tafsir Johansson**  
Co-Principal Investigator  
Assistant Professor



**Aspasia Pastra**  
Principal Researcher  
Assistant Professor



**Dr. Rían Derrig**  
PostDoc  
to December 2022



Website: <https://bugwright2.wmu.se/>





# Remote Inspection Techniques (RITs)



Autonomous Micro Air Vehicles (MAV)/drone



Autonomous Underwater Vehicles (AUV)



Magnetic Crawler



An inspector has real-time access to the detailed measurement map within a virtual reality environment.

# Introduction to Programme

**Funding:** 8.99 million €500,000 from the EU Horizon 2020

## 20 Project Partners:

- UMI 2958 GT-CNRS, France (Coordinator of BUGWRIGHT2);
- World Maritime University-Sasakawa Global Ocean Institute, WMU;
- Technical Centre for the Mechanical Industry, France;
- Faculdade de Engenharia da Universidade do Porto, Portugal;
- Universitat de les Illes Balears, Spain;
- National Institute of Applied Science, France;
- RWTH Aachen University, Germany;
- Universitaet Klagenfurt, Austria;
- Norwegian University of Science and Technology, Norway;
- Trier University, Germany;
- Lakeside Labs, Austria;
- Roboplanet, France;
- Blueye, Norway;
- Glafcos Marine Ltd., Greece;
- Porto Harbour, Portugal;
- Arsenal do Alfeite, Portugal;
- In Extenso Innovation Croissance, France;
- Danaos Shipping Co. Ltd., Cyprus; and
- Starbulk Shipmanagement Co. Ltd., Cyprus;
- Registro Navale Italiano (RINA), Italy;



## WMU Objectives:

1. Provide critical legal insights considering state-of-the-art remote inspection technologies, regulatory frameworks and selected national developments from China, Singapore, Norway, the Netherlands, Canada and the US; and
1. Develop a regulatory blueprint using a co-design process with key stakeholders



Funded by the Horizon 2020  
Framework Programme of the  
European Union



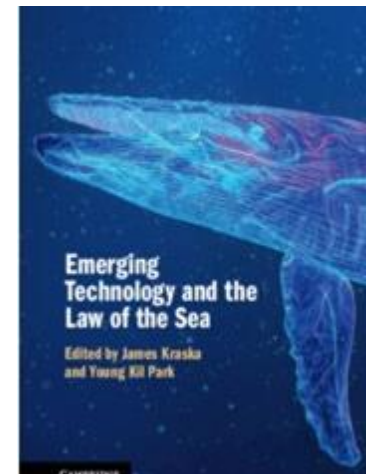
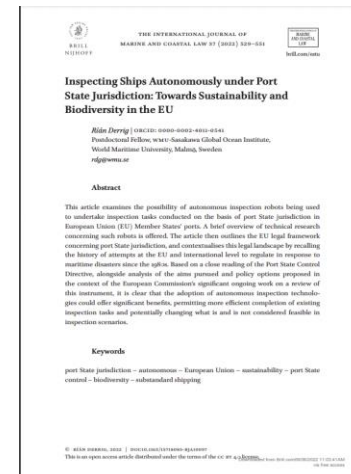
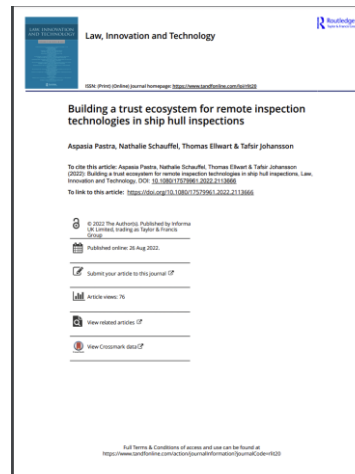
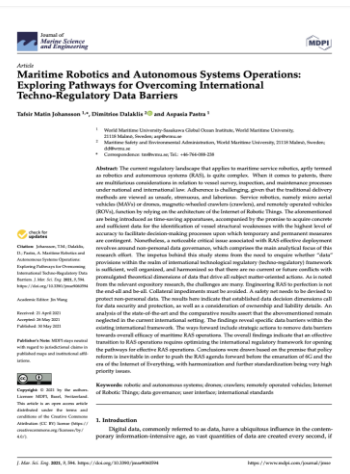
Work Package 1.4 Report  
Deliverable

# Legal Insights

Tafsir Johansson, Aspasia  
Pastra & Rian Derrig



Contribution. Development. Impact.  
WMU-Sasakawa Global Ocean Institute



Maritime Robotics and Autonomous  
Systems Operations: Exploring  
Pathways for Overcoming International  
Techno-Regulatory Data Barriers

Maritime remote inspection  
technology in hull survey &  
inspection: A synopsis of liability  
issues from a European Union  
context

Building a Trust Ecosystem for  
Remote Inspection  
Technologies in Ship Hull  
Inspections

Inspecting Ships Autonomously  
under Port State Jurisdiction:  
Towards Sustainability and  
Biodiversity in the EU

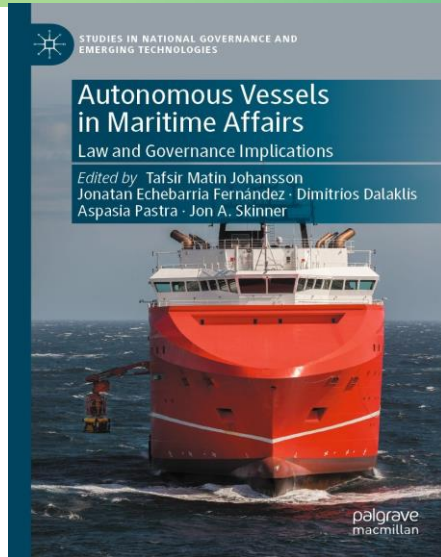
Emerging Technology and the  
Law of the Sea



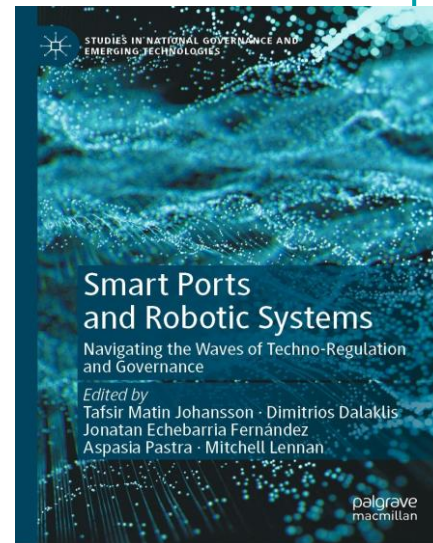
Funded by the Horizon 2020  
Framework Programme of the  
European Union



## Books



**Volume 1: *Autonomous Vessels in Maritime Affairs: Law and Governance Implications***



**Volume 2: *Smart Ports & Robotic Systems: Navigating the Waves of Techno-regulation & Governance***



# Bugwright 2 activities in a nutshell: 2019- March 2023

- ✓ Submission of two Legal Reports to the *European Commission*
- ✓ A number of Scholarly publications.
- ✓ Participation in international workshops, conferences and webinars.
- ✓ Establishment of the Senior Advisory Group.
- ✓ In-depth interviews and engagement with maritime authorities, classification societies, industry experts and labour bodies.

See more at: <https://bugwright2.wmu.se>



# Final Project event - In a nutshell



WMU-Sasakawa Global Ocean Institute is pleased to invite you to

## REGIONAL EVENT

## Overcoming Regulatory Barriers for Service Robotics in an Ocean Industry

### WMU-GOI BUGWRIGHT2 FORUM 2024

16 February 2024, 09:00 - 18:00 (EET)

Danaos Research Centre, Athens, Greece

The aim of this Forum is to deliberate upon the strengths, weaknesses, obstacles and prospects stemming from the implementation of technology and/or techniques within the maritime and oceanic realm.

The following topics will be discussed:

- Rise of Maritime Robotics: Because Humans were not Sufficient?
- Confronting Global Environmental Challenges with Innovation
- Technology & Industry Perception: Are we Ready?
- Global North v. Global South: Bridging the Digital Divide
- Innovation & Regulation: How Best to Break Silos?
- Recommendations for Digital Reform:  
Ways Forward Capacity Building & Technology Transfer



Financed by the Horizon 2020  
European Union



#Bugwright2Forum



WMU-Sasakawa Global Ocean Institute

# Global Ocean Institute (GOI): Key Reports and Publications



215

## International scholarly publications

*From inception of GOI 2018 to date 2024 by the GOI Core Team*

**Total numbers with extended WMU Ocean Team - 337**

Breakdown to

123

**International peer review articles** in journals of high international standing

**Total with WMU Ocean Team - 197**

66

**Scholarly book chapters** in specialist books concerning ocean affairs

**Total with WMU Ocean Team - 83**

14

**Academic edited collections** (Books)

**Total with WMU Ocean Team - 18**

12

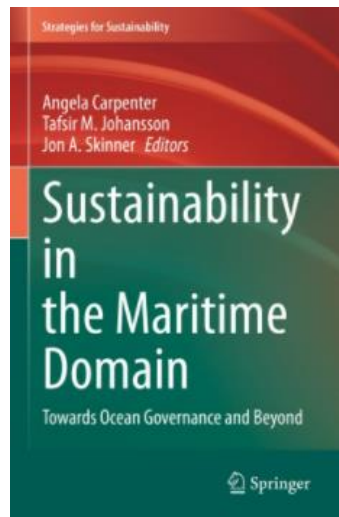
**Conference Reports and other publications**

**Total with WMU Ocean Team - 38**

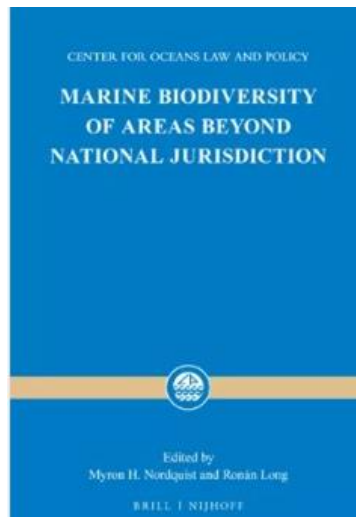


# Global Ocean Institute (GOI): Key Reports and Publications

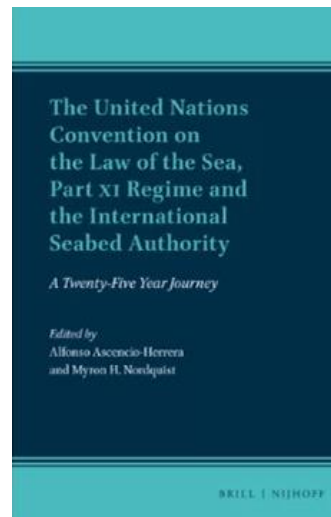
## Some of our academic monographs/edited contributions



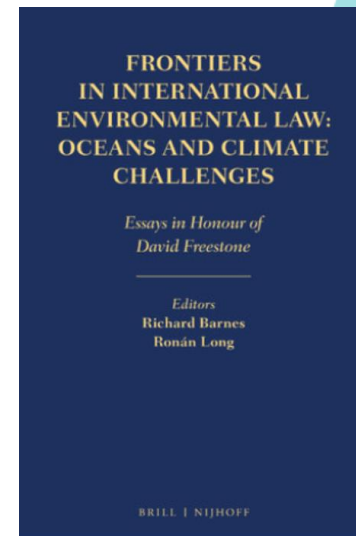
Carpenter, A.; Johansson, T. and Skinner, J. (2021) [Sustainability in the Maritime Domain: Towards Ocean Governance and Beyond](#), Springer: Strategies for Sustainability Series.



M. Nordquist, R. Long, (2021) [Biodiversity Beyond National Jurisdiction: Intractable Challenges and Potential Solutions](#) (Leiden/Boston: Brill/Nijhoff, 2021) 345pp.



Long R., Sun Z., Rodrigues Chaves M. (2021), '[Gender Leadership and the United Nations Decade of Ocean Science: Pioneering Role of the International Seabed Authority](#)' in Nordquist M, and Ascencio-Herrera, A. M (ed), [The United Nations Convention on the Law of the Sea, Part XI Regime and the International Seabed Authority: A Twenty-Five Year Journey](#) (Brill)

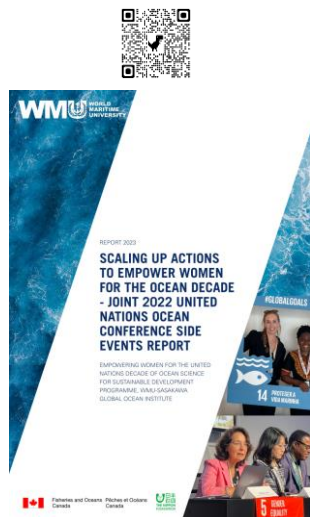


R. Barnes, R. Long (2021) [Frontiers in International Environmental Law: Oceans and Climate Challenges - Essays in Honor of David Freestone](#). (Leiden/Boston: Brill/Nijhoff, 2021) 640 pp.



# Key Reports and Publications

Some of our academic reports and conference volumes



Zhen Sun, Renis Auma Ojwala, Ellen Johannesen, Mariamalia Rodríguez Chavez, Ronán Long, Momoko Kitada, Susan Buckingham, Clive Schofield, and Francis Neat (Eds.), [Scaling up Actions to Empower Women for the Ocean Decade - Joint 2022 United Nations Ocean Conference Side Events Report](#), Malmö: World Maritime University, 2023.



Long, R., Doelle, M., (Ed.) [Workshop and side events report: biodiversity beyond national jurisdiction: Towards the development of a balanced, effective and universal international agreement](#). Malmö: World Maritime University, 2020

30



Sun, Z., Long, R., Rodríguez-Chaves, M., Kitada M., Neat, F., Schofield, C., Buckingham, S., Jarnsäter, J., Barjandi, E., Auma Ojwala, R., and Johannesen, E. (Ed.), [Empowering Women for the United Nations Decade of Ocean Science for Sustainable Development](#), Malmö: World Maritime University, 2021



# Global Ocean Institute (GOI): Key Reports and Publications

Over the past 6 years the GOI Team and Students have:

## 20+

Hosted Conferences,  
Events & Workshops



## 40+

Hosting Webinars and  
Capacity building Activities



## 150+

Presentations at  
International & Regional  
Conferences



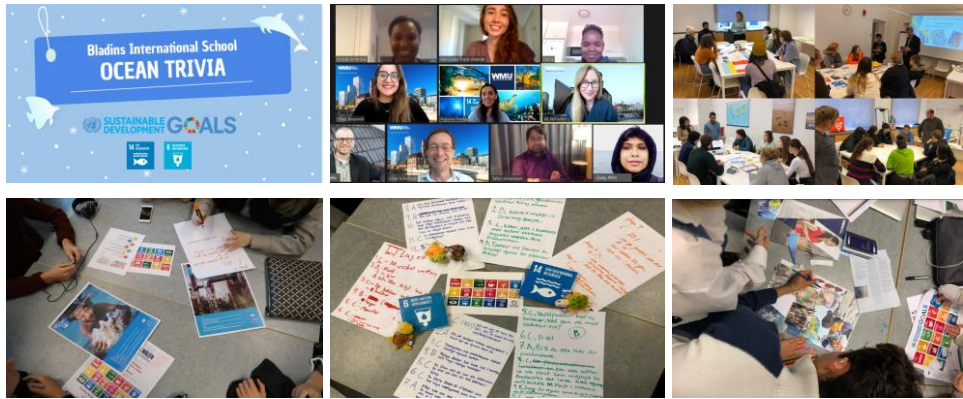
<https://www.wmu.se/events>

WMU-GOI Operations and Event team:



# Key Collaborations with City of Malmö: contributing to our local community

Cooperation and collaboration with the City of Malmö



**Ocean Research & SDGs Workshops with Local Youth**  
For Malmö Bladins International, Malmö Latinskola and the Science Centre of Malmö Museum, 2021, Malmö, Sweden



**WMU Contribution to the Ocean Literacy Action Conference 2022**  
Co-hosted with City of Malmö and SwAM etc, May in Malmö, Sweden



**WMU Contribution to the Malmö Museum Exhibition: "Dangers at Sea"**  
Key Feature at the Women and Men at Sea", 2021 - 2023, Malmö, Sweden



# WMU Graduation 2023



**WMU**  **40 YEARS**  
WORLD MARITIME UNIVERSITY





# Thank you!

Visit for more information:

<https://www.wmu.se/goi>

Warm invitation to contact us at:

[asp@wmu.se](mailto:asp@wmu.se)



Swedish Agency  
for Marine and  
Water Management



The  
Federal Government

