



UN 23: Accelerating Transformations in Capacity Development in the Western Pacific – Regional Network of Training and Research Centers (RTRCs) on Marine Science

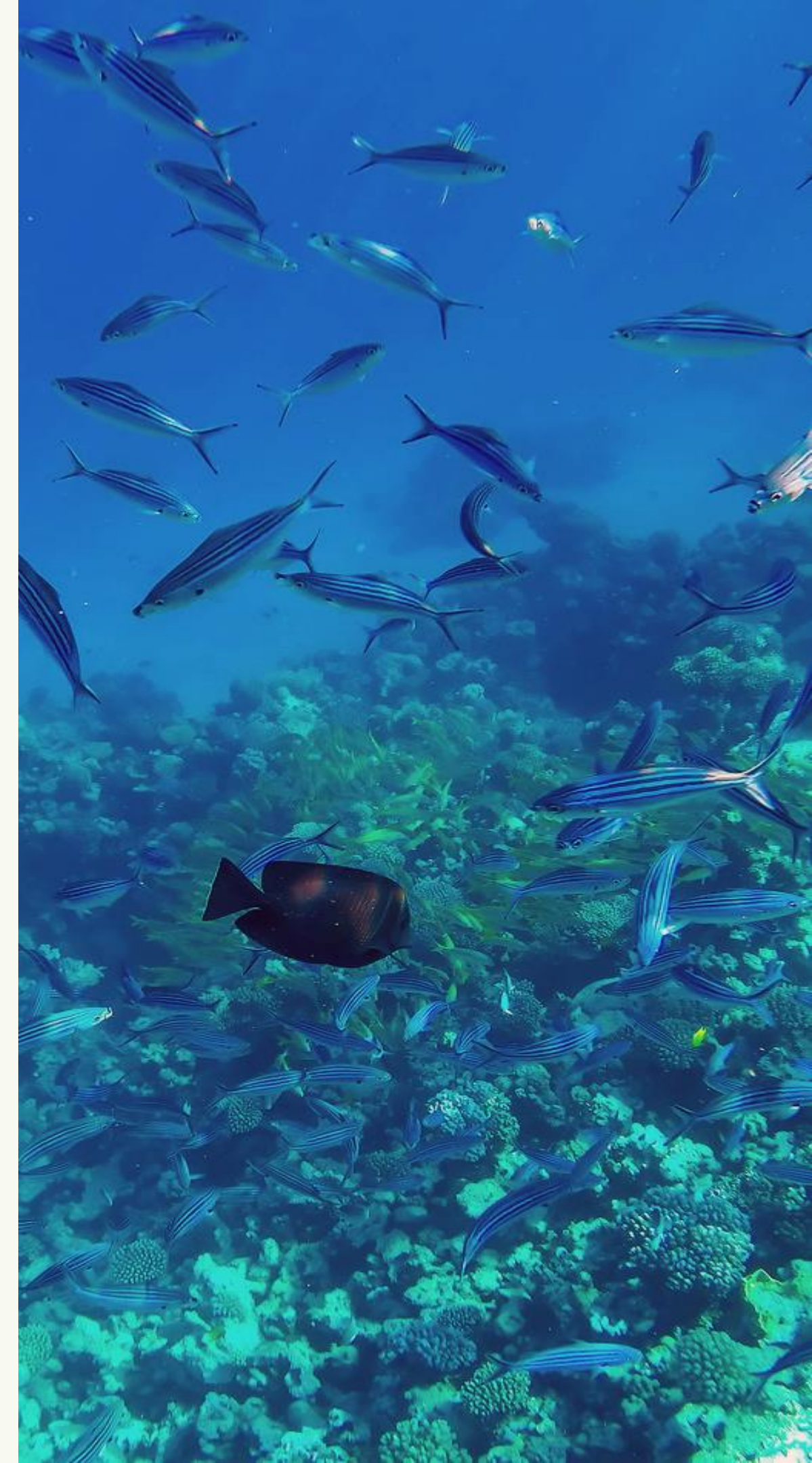
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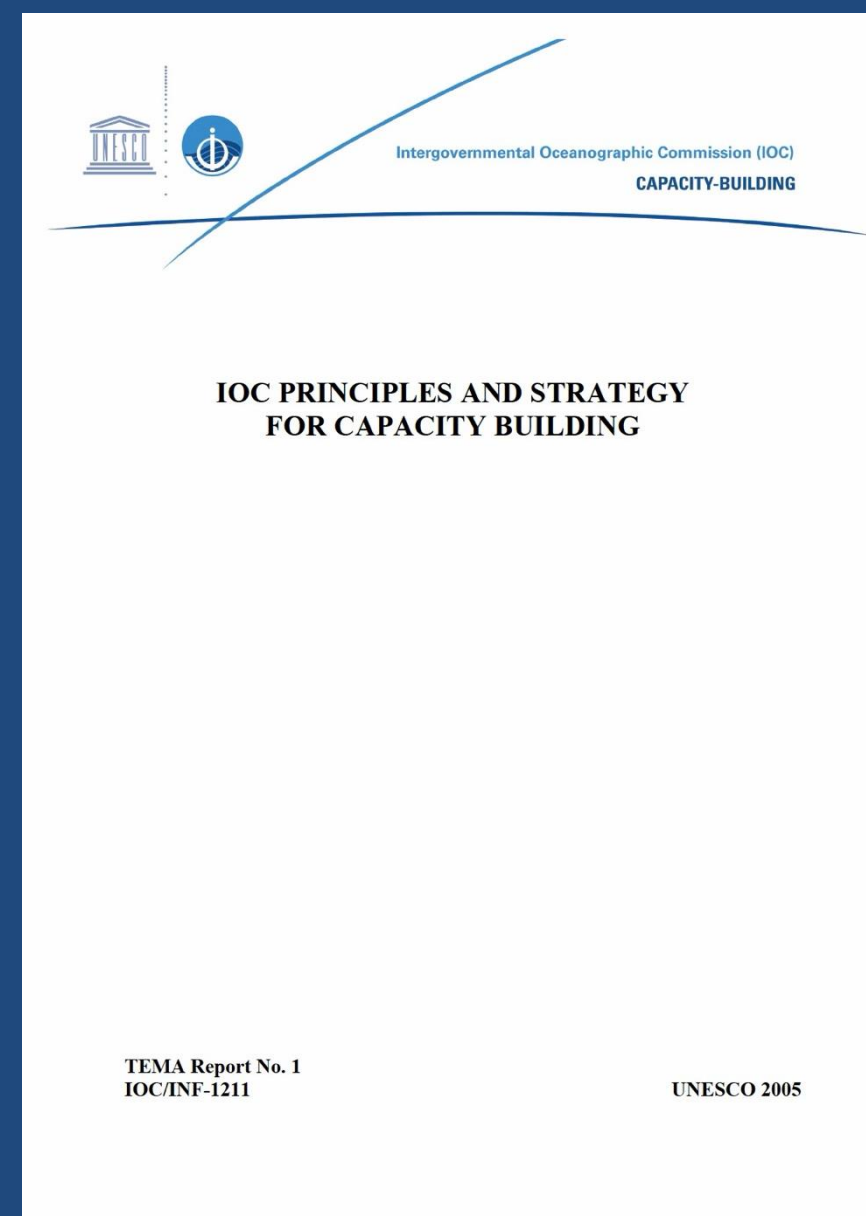
Sixteenth Intergovernmental Session of the
IOC Sub-Commission for the Western Pacific (WESTPAC-XVI)
Hangzhou, China, 10-12 November 2026

Outline

1. Background
2. Development and Objectives
3. Activity Overview
4. Achievements and Results
5. Stakeholder Engagement
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1. Background



Adopted at the 23rd Session of the IOC Assembly, Paris 21–30 June 2005, through Resolution XXIII-10.

“The vision of IOC capacity-building is to establish networks of scientists, managers and other practitioners working within regional and other cooperative mechanisms to create demand-driven science, enhance protection of the marine environment, and provide operational oceanographic services for the benefit of all humanity.”

The Strategy for Capacity-building can be summarized as follows:

1. Capacity-building interventions will follow the *Principles of Capacity-Building*.
2. The Medium-term Strategy of IOC, and its main operating themes, will be the framework within which IOC Capacity-building initiatives will be *aligned and harmonized*.
3. On-going *Regional Projects, addressing key regional concerns*, will be primary vehicles for Capacity-building interventions.
4. Regional Project objectives will be facilitated through *Capacity-building Pilot Programmes*. Submission to funding agencies of pilot proposals, formulated by regional networks of scientists, will be facilitated by IOC regional entities in cooperation with IOC secretariat. Importance will be paid to leadership programmes for heads of organizations and team-building programmes for scientists.

“Inherent in the vision statement is the concept of ‘self-directed capacity-building’ that leads to autonomous development cycles.”

1. Background

“IOC has a long tradition of capacity development coordination and implementation through its Sub-Commissions and Regional Committees.”

“The IOC Sub-Commission mechanism is an effective bottom-to-top governance mechanism that enables Member States to closely work together at the regional level. The mechanism is highly dependent on an efficient secretariat that ensures effective communication streams between the Member States and coordination, implementation and monitoring of activities. IOC should strengthen the secretariats of the Sub-Commissions to ensure they are adequately staffed (both in terms of staff number and competencies).”



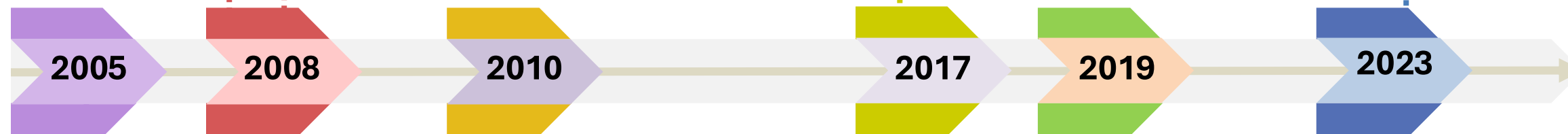
2. Development and Objectives



The region-specific capacity development program "RTRC on Marine Science", 26-29 May 2008, Sabah, Malaysia.



Endorsed by IOC 41st session of Executive Council, June 2008, Paris, France



Adopted IOC Principles and Strategy for Capacity Building, June 2005, Paris



Establishment of RTRC-ODC, May 2010, Bali, Indonesia



Establishment of RTRC-MarBEST, April 2015, Indonesia



Establishment of RTRC-Coastal COMMIT, April 2023, Jakarta, Indonesia



Establishment:
RTRC on Reef Management and Restoration
RTRC on Marine Toxins and Seafood Safety
RTRC on Marine Plastic Debris and Microplastics
April 2019, Manila, the Philippines

Six thematic RTRCs:



RTRC on Ocean Dynamics and Climate

Host Institute:
First Institute of Oceanography (FIO),
Qingdao, China

Establishment:
11 May 2010



RTRC on Marine Biodiversity and Ecosystem Health

Host Institute:
National Research and Innovation Agency (BRIN),
Jakarta, Indonesia

Establishment:
21-23 April 2017



RTRC on Marine Plastic Debris and Microplastics

Host Institute:
East China Normal University,
Shanghai, China

Establishment:
2 April 2019



RTRC on Marine Toxins and Seafood Safety

Host Institute:
Institute of Oceanography,
Khánh Hòa, Vietnam

Establishment:
2 April 2019



RTRC on Reef Management and Restoration

Host Institute:
University of the Philippines,
Philippines

Establishment:
2 April 2019



RTRC on Coastal Contaminant Monitoring and Marine Innovation Technology

Host Institute:
City University of Hong Kong,
Hong Kong, China

Establishment:
4-7 April 2023

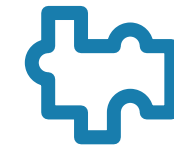
Empowering people in marine science: WESTPAC Efforts in Capacity Development



Guiding principles



Adaptiveness



Integration



Inclusiveness



Empowerment

Approaches

- ☐ **Co-design and co-develop** with Member States to address national and regional needs.
- ☐ Build on the **recognized expertise and strengths** of the host institutions, particularly national ocean research institutes and universities.
- ☐ **Link training to concrete R&D objectives.**
- ☐ **Integrate capacity development in the design and implementation** of regional projects and programmes.

Homegrown, institutionally anchored, and regionally connected



3. Activity Overview



3.1 RTRC - Marine Biodiversity and Ecosystem Health (MarBEST)

Aims to

- Developing and strengthening the capacity and capabilities of human resources, particularly young researchers and lecturers from member countries in the Western Indo-Pacific region, through training and research related **to marine biodiversity and ecosystems**;
- Researching and developing **common methodologies for marine ecosystem health monitoring and assessment**, especially **coastal ecosystems** such as coral reefs, seagrass, and mangroves;
- Promoting scientific collaborations among experts, institutions and countries in this region and beyond, on marine ecosystem health monitoring and assessment.

Host Institute:

National Research and Innovation Agency, Indonesia

Establishment: April 2017

Major activities 2023-2024



National training: Fish Taxonomy, Tailor made: Monmang for AIS 2023



Training Course on Remote Sensing-based Seagrass Blue Carbon Assessment, September 2024

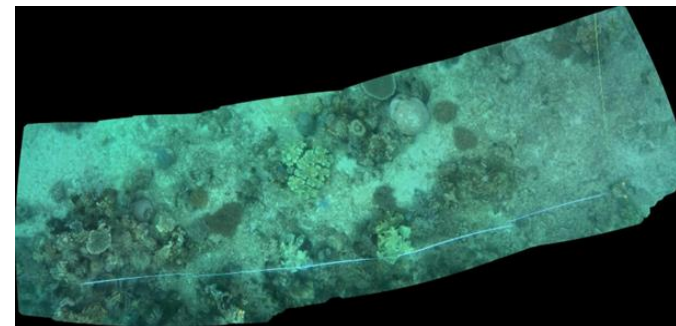
3. Activity Overview

3.2 RTRC – Coastal Contaminant Monitoring and Marine Innovation Technology (Coastal COMMIT)

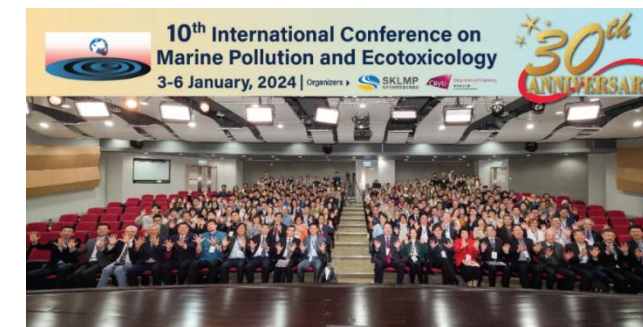
Aims to

- Serve the needs of countries in the region to **ensure ecological safety**, and thereby **protect key marine habitats** and **conserving biodiversity and natural resources** therein;
- Assist countries, particularly the developing nations, in the WESTPAC region and its adjacent areas, in **enhancing their research capacity** for coastal contaminant monitoring, promote the development of marine innovation technologies;
- **Facilitate international research collaboration** for the protection of marine environment and sustainable development.

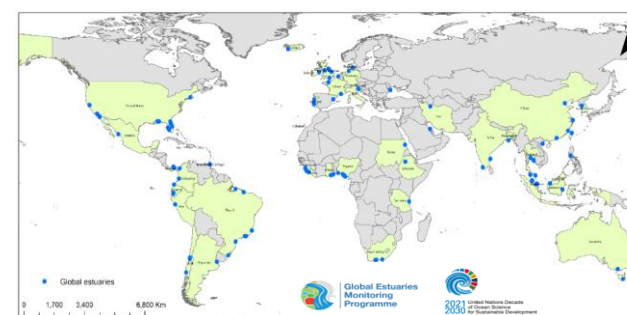
Major activities 2023 - 2024



Scientific Diving Training Programme at the Pulisan Bay North Sulawesi, Indonesia, May 2023



10th International Conference on Marine Pollution and Ecotoxicology, Jan 2024



UN Decade endorsed - Global Estuaries Monitoring (GEM) Programme, GEM will contribute to the reduction of global marine pollution via developing cleaner and safer global estuary solutions.



Host Institute:
City University of Hong Kong, Hong Kong, China

Establishment: April 2023



Award- Winning at 49th International Exhibition of Inventions Geneva 2024 for “Nearshore Benthic Habitat Mapping and Assessment Technique”

3. Activity Overview

3.3 RTRC – Plastic Marine Debris and Microplastics



Aims to

- Improve the **research and monitoring capacity** of countries in the region for plastics and microplastics, including sampling techniques, measurement, modeling, and impact assessment;
- Develop and cultivate a network of talented **young researchers** on plastics and microplastics;
- Share and learn the **best practices** on marine environmental governance among developing countries in the region.

Host Institute:
East China Normal
University, Shanghai, China

Establishment: April 2019

Major activities 2023 - 2024



Establish RTRC branch in Sanya, Training in Sanya UN decade workshops, November 2023



Develop demonstration training videos on sampling methodology during the fieldwork at Hoi An River estuary, Vietnam, October 2024

WESTPAC-XVI, 10-12 November 2026, Hangzhou, China

3. Activity Overview



3.4 RTRC – Reef Management and Restoration

Aims to

- Enhance the capacity of **young scientists and young lecturers**;
- Strengthen the **network** of scientists on reef management and restoration in the Western Pacific;
- Contribute to the **sustainable development and conservation of marine and coastal resources** through research and training.

Host Institute:

University of the Philippines, Philippines

Establishment: April 2019

Major activities 2023 - 2024



With growing necessity for ecological restoration efforts, a training workshop on coral restoration was conducted in 2023 in partnership with UP Marine Science Institute.

WESTPAC-XVI, 10-12 November 2026, Hangzhou, China

3. Activity Overview



3.5 RTRC - Marine Toxin and Seafood Safety (MTSS)

Aims to

- **Enhance the capacity** for toxin detection, identification, and analysis through the development and operation of professional training and expert exchanges;
- **Promote cooperation and conduct joint studies** on marine toxin research and seafood safety among scientists, institutions and countries in the region and beyond.

Host Institute:

Institute of Oceanography,
Khánh Hòa, Vietnam

Establishment: April 2019

Major activities 2023-2024



RTRC-Marine Toxin and
Seafood Safety performance
evaluation, September 2023

WESTPAC-XVI, 10-12 November 2026, Hangzhou, China

3. Activity Overview



3.6 RTRC - Ocean Dynamics and Climate (ODC)

Aims to

- Promote the **international cooperation** and enhance the **research capacity** and capability in WESTPAC region on ocean dynamics, air-sea interactions, climate change and numerical modeling through the provisions of international annual training courses and workshops to junior scientists and doctoral/master students mainly from the Member States of IOC in the Western Pacific.

Host Institute:

First Institute of Oceanography (FIO), China

Establishment: May 2010

Major activities 2023 - 2024



The 12th training course on Ocean Model and Data Assimilation, Qingdao, China, 10-21 July 2023



The 13th training course on Ocean Model and Ecosystem Model, Qingdao, China, 8-13 July 2024

4. Overall Implementation,

Overall Implementation

- The RTRC network is **expanding steadily** with more research institutions and universities **joining and committed** to contributing to capacity development.
- Regular **stocktaking** and **communication**, conducted performance **assessments** for summarizing and documenting during operation.
 - *RTRCs workshop was organized to enhance communication, engaging stakeholders and co-development of the RTRCs.*
 - *Assessment: RTRC-MarBEST and RTRC-ODC in 2020, RTRC-MTSS in 2023*



Outcomes

- Contributed to the establishment of **regional networks** among pertinent researchers/practitioner, facilitated by the ongoing engagement of the RTRC Alumni Group.
- Accelerated **technology and knowledge transfer** by offering lectures, conducting hands-on field practice, and creating opportunities for knowledge sharing among trainees, strengthened collaborations through joint research.
- Enhanced **capacity on tackling emerging ocean issues** in the region, specifically for young professionals and ECOPs by providing financial support and career opportunities.

5. Stakeholder Engagement



Various partnerships are being established at the international, national and local levels among diverse stakeholders, including government agencies, academia/research communities, business/private sector, NGOs and civil society.



UN23 builds on cooperation and partnerships among countries and institutions at the regional level to share knowledge, expertise, infrastructure and technology, and promote the co-development of ocean science solutions to ocean sustainability.



UN23: RTRCs made great efforts in engaging young professionals and Early Career Ocean Professionals, Financial support in the form of travel grants have been provided to facilitate their participation, provide career opportunities.

6. Challenges and Strategic Recommendations

Challenges

- ☐ Institutional restructuring and organization changes within host institutions
- ☐ Limited coordination capacity at the WESTPAC Office due to the lack of dedicated personnel

Recommendations

- ☐ Enhance coordination and co-development with RTRCs, and their host institutions, through regular consultations, joint planning, and knowledge exchange
- ☐ Encourage secondments from Member States to the WESTPAC Office to strengthen coordination capacity, facilitate communication, and support the development of joint activities.
- ☐ Enhance institutional commitment and continuity by engaging the leadership of host institutions to secure sustained support for RTRC operations, particularly during institutional transitions.



Thank you!

