WHAT’S INSIDE?

WIOMSA & PARTNERS NEWS
2 WIOMSA Board meeting and decisions
3 The WIOMSA Board appoints Coopted Members
4 New WIOMSA Programme – focus on scaling science and integrated knowledge translation
5 Successful WIO-COMPAs certification event takes place in Seychelles
7 The role of women in global monitoring for environment and security in Africa
10 Urgent and coordinated regional action is crucial to combat IUU fishing in the WIO region
12 A shared vision to tackle illegal, unreported, and unregulated fishing

REGIONAL NEWS
14 WIOGI, IORA and NBO Convention meetings
17 First citizen-science mobile app for mangrove monitoring in Mauritius
18 World Ocean Day commemorated in Tanzania
20 Nurturing a new wave of ocean champions.
22 ReMoTURB – addressing long-term fisheries sustainability against global environmental changes
25 RECOS project launches Exchange of Experiences Programme
27 WIO mangrove and seagrass restoration stakeholders benefit from Seychelles’ experiences
29 The Miamba Yetu: sustainable reef investments programme – first-ever blended finance instrument
30 Conservation of dugongs in the south-west Indian Ocean
32 Revolutionizing seaweed farming through microcredit and savings schemes
34 Une toute première feuille de route pour renforcer les compétences des gestionnaires d’aires marines de l’Océan Indien Occidental
36 The potential to advance seafloor mapping and ocean exploration

HIGHLIGHTS FROM RECENTLY PUBLISHED PAPERS
38 Where to fish in the forest
40 What’s on the horizon for community-based conservation?
42 Coral reef restoration by the tourism sector is possible
44 Commercial extinction of grouper species is a looming risk in Kenya
46 Indigenous knowledge is important for effective mangrove conservation – the case of Rufiji Delta

NETWORKS: WIMS
48 WIMS at the African Maritime Leadership Conference

OPINION:
49 The private sector in oceans governance: From talk to action

ANNOUNCEMENT
51 Job opportunity. WIOMSA: Programme Manager
The 8th WIOMSA Board of Trustees held its first in person meeting, involving all members, on the 16th and 17th of June 2023 in Nairobi. This was the WIOMSA Board’s 44th meeting, which also served as the new Board’s orientation.

Dr. Jacqueline Uku, the immediate past president of WIOMSA, and Dr. Julius Francis, the former Executive Secretary who is now a WIOMSA Trustee, also attended the meeting to share their perspectives and experiences with the new Board.

The Board deliberated on a number of issues aimed at improving the Secretariat’s operational capacity, such as a new Human Resource Manual and Business Plan. The Board approved the implementation of the new Science-Policy programme and the hiring of new personnel to support its implementation. In addition, the Board authorized the beginning of the election of Country Coordinators and the consolidation of WIOMSA affiliate networks. On the second day of the Board meeting, the WIOMSA Trust Trustees evaluated the Trust’s performance and engaged the Trust’s future direction.
The 8th WIOMSA Board of Trustees recently appointed two co-opted members to join its ranks: Prof Antonio Hoguane, the Director General of the Mozambique Oceanographic Institute (Instituto Oceanográfico de Moçambique (INOM)) and Mr. Glenn Ricci, Coastal Research Associate, Marine Protected Areas, the Coastal Resources Center (CRC), University of Rhode Island.

Glenn is an associate coastal manager at the Coastal Resources Center (CRC) at the University of Rhode Island (URI). He joined CRC in 2001 and is the program leader for CRC’s capacity development portfolio and manages projects in Asia, Africa and the USA. His work focuses on developing governance arrangements that foster leadership, collaboration, and co-management in areas of climate change adaptation, fisheries management, and marine protected areas. Glenn co-leads CRC’s portfolio for capacity building of coastal leaders. He heads several international capacity-building activities in roles ranging from program designer to trainer, facilitator and evaluator. His capacity development work ranges from personal leadership programs and certifications of professionals to systems analysis at organizational and institutional levels. Prior to joining CRC, Glenn worked in international policy development on environment and trade issues at the U.S. Environmental Protection Agency. He also worked in the private sector developing a marine tourism business in Latin America. Glenn has a M.S. in Environmental Management, a M.S. Human Development & Relational Systems, and a B.S. in Biology.

Antonio is a Professor of Physical Oceanography at Eduardo Mondlane University, Mozambique. He graduated in Physical Oceanography and Mathematics in 1993 and obtained his PhD degree in Physical Oceanography in 1997, at the University College of North Wales, UK. He was a post-doc research fellow at the Institute of Geophysics, University of Bergen. His main research interest areas include tides and tidal currents, hydrodynamics of estuaries and coasts, marine physical-biological coupling and energy from the sea. Prof. Hoguane has extensive research experience in the Western Indian Ocean region, having published numerous scientific articles and books.

The WIOMSA Board is delighted to welcome Antonio Hoguane and Glenn Ricci whose collective expertise will be invaluable to WIOMSA’s work.
NEW WIOMSA PROGRAMME – FOCUS ON SCALING SCIENCE AND INTEGRATED KNOWLEDGE TRANSLATION

The Government of Sweden through the Swedish International Development Agency (Sida) has committed 70 million Swedish Kroner (approximately US$ 6,400,000) to WIOMSA over the next three years (2023-2026), to support a new program, “Sustainable Blue Future in the Western Indian Ocean – Institutional Strengthening through Science, Capacity and Assimilation for a Sustainable Blue Future (SCALABLE)”. Sida’s new contribution will help WIOMSA train WIO scientists, early career professionals, marine and coastal resource managers, governments, and local communities. It will also support WIOMSA’s efforts to improve researchers’ and policymakers’ engagement through multi-stakeholder exchanges, capacity-building activities, co-development and co-implementation processes, and integrative scientific assessments to bridge the science-policy gap and support the inclusive generation of knowledge and the development of comprehensive policies to support the WIO Blue Economy. In this programme, WIOMSA has prioritized problem-solving and applied ocean scientific research that will advance the UN 2030 Agenda and its Sustainable Development Goals (SDGs), the UN Decade of Ocean Science and the Global Biodiversity Framework.

The focus of SCALABLE programme is to scale the impact of WIOMSA’s actions; particularly around building institutional capacity for marine science and assisting the Western Indian Ocean (WIO) region in strengthening a knowledge-based blue economy.
SUCCESSFUL WIO-COMPAS CERTIFICATION EVENT TAKES PLACE IN SEYCHELLES

The Western Indian Ocean Certification of Marine Protected Area Professionals (WIO-COMPAS) programme, now in its fifteenth year of implementation, presented a combined certification assessment event for MPA managers (Level 2 MPA Professionals) and marine field officers (Level 1 MPA professionals) in Seychelles in May 2023.

The event provided an opportunity for the WIO-COMPAS programme to be profiled in Seychelles and highlighted the importance of capacity building in protected area management.

Officially launched by the Minister of Agriculture, Climate Change and the Environment, Seychelles, the Hon Flavien Joubert, the certification event was jointly hosted by WIOMSA and the Seychelles Parks and Garden Authority, with funding from the Blue Nature Alliance and WWF South Africa.

Speaking at the event, Minister Joubert underscored the importance of partnerships and collaboration for the fostering of connected and effective MPA networks in the WIO region.

“The certification programme links like-minded professionals to gain the skills and knowledge that would allow WIO countries to reach national, regional and international standards and objectives for the sustainable management of PAs.

“I would like to express my gratitude to all actors involved in maintaining this cooperation and all officials involved for the successful implementation of the training programmes and exchanges which continue to benefit, inspire and bear fruit for our MPA professionals,” he said.

“I can only continue to echo the importance of ensuring that as a country, as a protected area network and as partners we remain abreast with the best practices, shared experiences and effective strategies. These can only be achieved through continued capacity building, such as the MPA Pro Certification. Indeed, a prerequisite for continued success for MPA practitioners is continuous exposure and career development,” he added.
Successful WIO-COMPAS certification event takes place in Seychelles

...continued

Thirteen candidates were certified as Level 1 and Level 2 MPA PROs

Level 1 MPA PROs
1. Clive Hendricks (South African National Parks)
2. Luke Linde (CapeNature South Africa)
3. Bakari Sheyumbe (Kenya Wildlife Service)
4. Michael Elisha Luwondo (Marine Parks and Reserves Unit, Tanzania)
5. Demien Mougal (Seychelles Parks and Garden Authority)
6. Anto Suzette (Seychelles Parks and Garden Authority)
7. Du Wayne Bartlett (South African National Parks)

Level 2 MPA PROs
8. Catherine Msina (Marine Parks and Reserves Unit, Tanzania)
9. Rob Milne (South African National Parks)
10. Tima Dago (Kenya Wildlife Service)
11. Karine Pothin (Reunion Natural Marine Reserve)
12. Julius Pagu (Marine Parks and Reserves Unit, Tanzania)
13. Huyghén Behanarina (World Conservation Society (WCS, Madagascar)

The WIO-COMPAS certification body heartily congratulates all the MPA Pros for successfully going through the certification process and earning their right to wear the MPA-PRO badge.

Tools to assess the competence of candidates

WIO-COMPAS uses various tools to assess the competence of candidates. These include the application form; core activity documents and case studies which candidates prepare focusing on their core mandates in their MPAs; portfolios which provide documentary proof of work-related activities; the written assignment and ecology quiz which assesses their knowledge of the biophysical and socioeconomic context; boat and beach patrols; and face to face interviews.

The tools assess competencies and knowledge across seven competence areas: management effectiveness; marine conservation, MPA and other approaches; communication and stakeholder engagement; human and financial resources management; management implementation and effectiveness; biophysical and socio-economic context; and leadership and ethics.

Visit the WIO-COMPAS website and subscribe to the WIOMPA NewsLetter for more information on the next certification event.
ENHANCING EXISTING OCEAN ACIDIFICATION EFFORTS  | By Jessie Turner

The International Alliance to Combat Ocean Acidification (OA Alliance) and the Western Indian Ocean Marine Science Association (WIOMSA) hosted a webinar on 19 May to provide an overview of and seek feedback on, “Mapping OA Monitoring and Research Recommendations to Policy in Africa,” a joint policy communications project they are undertaking in 2023.

The policy communications project flows from the ocean acidification monitoring project established by WIOMSA in conjunction with regional institutions and experts. The monitoring project resulted in the WIO OA report in 2022, which examines the state of ocean acidification and makes recommendations for future research and information priorities across six countries: Kenya, Tanzania, Mozambique, South Africa, Mauritius and Seychelles.

To support communication about the importance of advancing and funding this work, the OA Alliance/WIOMSA policy communications project will enhance existing ocean acidification efforts in the region by illuminating the relationship to consequential policy goals and targets that decision-makers and managers are already tasked with implementing.

The aim is to develop materials that help policymakers understand the relevance of ocean acidification information to policies and targets they care about, and develop content that will further support large-scale regional funding requests for continuing this work.

The project provides a unique opportunity to engage additional stakeholders at continental, regional and domestic levels that can be called upon to support ocean acidification research and monitoring across their respective mandates.

Download the meeting summary and participant discussions
During the three-day conference, CSIR and its partners, including WIOMSA, under the Africa Marine and Coastal Operations for Southern Africa project presented products and technical services developed under the GMES & Africa programme.

The conference, “Earth Observation bridging the gap between science and policy”, was opened by the Minister of Higher Education Science Technology and Innovation, the Hon Prof Maria do Rosário Bragança. She addressed over 100 delegates, including students (70 percent of whom were women) on a training programme. In her opening remarks she hailed the workshop as a perfect platform to gather stakeholders to share knowledge and best practices on earth observation systems.

Advocate Lulekwa Makapela, CSIR Strategic Initiatives Implementation Contracts Manager and National Earth Observations and Space Secretariat Manager referred to the United Nations Environment Programme publication for climate change in Southern Africa of 2013. It is reported that Africa, especially Southern Africa, is continuously faced with climate change variability, natural disasters, and environmental degradation which has a negative impact on agricultural production and economic productivity.

“People suffer more from natural disasters such as drought, fires, floods and so on. South Africa has suffered from various natural disasters which have put their technological capability to the test,” she added.

It is against this backdrop that GMES & Africa aims to promote the development of local capacities, and institutional, human, and technical resources for access to and exploitation of earth observation-based services on an operational basis for sustainable development and disaster risk reduction in Africa.
Women in GMES & Africa fireside chat

On the first day of the workshop, women in GMES & Africa drawn from diverse professions in marine, coastal and terrestrial global monitoring, held a fireside talk to highlight challenges and opportunities and give their thoughts on the role of women in science and in GMES and Africa. The panel discussion chaired by SASSCAL Executive Director, Dr Jane Olwoch, sought to give women an opportunity to share experiences and explore ways of streamlining their concerns on the GMES & Africa agenda.

Women in GMES was formed by the African Union Commission (AUC) in 2021, to offer women an opportunity to look deeper into the challenges of women in science institutions in Africa and use the platform to find solutions. In the second phase of the GMES & Africa, AUC has made it mandatory for the inclusion of women and youth in all aspects of the programme, with the aim of a 60:40 participation ratio.

Key issues that prompted a heated discussion with the audience included company policies to address sexual harassment in the workplace; management style by women and men; and access to growth opportunities for women in GMES and science.

An important takeaway in the discussion was how managers and supervisors can help women suffering from imposter syndrome by developing avenues or internal programmes to help them reach their full potential. It also emerged that there are various women's networks, such as Women in Energy, Women in Green Hydrogen, Women in Copernicus, Women in GMES, the Association for Women in the Maritime sector in Eastern and Southern Africa (WOMESA), the Network for Women in Marine Science (WiMS), and so on, with similar objectives. However, it is not known how much of an impact they are making or how successful they are in capturing the niche they have identified or are working in.

Nonetheless, their existence means something in each sector and with incremental steps they will have a positive impact on women and provide youth and women in their early careers to access mentorship, career guidance, capacity development and networking opportunities beyond their home countries.

Women's participation in GMES & Africa will always be an opportunity for decision and policymakers to see emerging and current issues from the perspective of women and children who are predominantly more vulnerable to climate change risks, natural disasters, sexual harassment, and bills that have hidden gender-biased agendas.

Hence, women in positions of power as decision-makers, researchers, politics, and policy will enable an inclusive and equitable inclusion of women, youth and children policy, educational and training programmes, and the workplace.
Illegal, unreported, and unregulated (IUU) fishing poses a grave threat to the sustainability of fisheries in the Western Indian Ocean (WIO) region. With nearly one-third of Africa’s population relying on fisheries for food and millions depending on the sector for their livelihoods, the consequences of IUU fishing extend beyond environmental degradation to the social and economic well-being of coastal communities.

In 2021, the FAO reiterated that, “IUU fishing is one of the greatest threats to marine ecosystems and undermines regional efforts to achieve sustainable fisheries”.

In response to this pressing issue, several regional initiatives have emerged to combat IUU fishing. One notable event was the IUU Symposium by Blue Ventures and the US Embassies for the Comoros and Madagascar, hosted in Madagascar, which brought together stakeholders from different countries and organizations.

While these efforts have primarily focused on industrial-scale IUU fishing activities, one organization, the Western Indian Ocean Marine Science Association (WIOMSA), has taken a pioneering approach by addressing the impact of IUU on small-scale fisheries.

**Improving understanding and awareness of IUU fishing in small-scale fisheries**

WIOMSA, with support from the Blue Nature Alliance (BNA), launched a project aimed at improving the understanding and awareness of IUU fishing in small-scale fisheries across the region. Their efforts began with a paper presented at the 2021 Conference of the Parties of the Nairobi Convention, which made important policy recommendations. These recommendations urged the parties to recognize IUU fishing as a significant threat to sustainable resource management, the Sustainable Development Goals (SDGs), and Blue Economy initiatives.

They also called for the development of a regional plan of action, including assistance in formulating legislation and regulations for small-scale fisheries, improved communication between fishers and policymakers, and enhanced community-based management and monitoring.

The WIOMSA/BNA paper put forth two technical recommendations: conducting a regional assessment of IUU in small-scale fisheries and establishing an inter-sectoral IUU fishing expert panel. This regional assessment, which included the development of the Small-Scale Fisheries IUU (SSF IUU) Index by Jim Anderson, has provided valuable...
Insights into the vulnerabilities and perceptions of IUU fishing in the WIO region. It has shed light on crucial questions such as the characteristics of illegal fishing, the availability of data for informed decision-making, the existence of appropriate regulations, and the effectiveness of surveillance and compliance enforcement.

**Understanding the extent of the problem and addressing the underlying drivers**

Building on the assessment, a SSF IUU workshop was held on Unguja Island, Zanzibar. Attended by representatives from the Comoros, Kenya, Madagascar, Mozambique, Seychelles, South Africa, Tanzania and Zanzibar, as well as WIOMSA and the BNA, the workshop emphasized the importance of understanding the extent of the problem and addressing the underlying drivers of IUU fishing.

It was opened by Dr Aboud Jumbe, the Permanent Secretary to the Ministry of Blue Economy, Zanzibar. He reiterated the importance of understanding the extent of the problem, and the need for interventions that address the drivers of IUU fishing and its activities.

Participants exchanged ideas on how to communicate information on policy and regulations throughout the fisheries management structure in each country. They also shared experiences and expertise in monitoring, control and surveillance, exploring methods such as direct estimation of illegal fishing and behavioural change approaches to enhance compliance. Discussions on the introduction of feasible technology and the involvement of citizens emerged as crucial to addressing IUU in SSF.

**Piloting SSF IUU interventions in the region**

To translate the discussions into action, WIOMSA announced the availability of funds for piloting SSF IUU interventions in the region. Innovative proposals addressing any aspect of IUU in small-scale fisheries can receive up to USD 30 000 in financing for a one-year period. WIOMSA also expressed its intention to seek funding for additional pilot site interventions and programme evaluations. Participants also agreed on the need for a science-to-policy paper on SSF IUU to be developed and presented at the upcoming science policy meeting of the Nairobi Convention.

Moving forward, urgent and coordinated regional action is crucial to combat IUU fishing effectively in the WIO region. The efforts of organizations like WIOMSA, along with the support of the BNA and other partners, have highlighted the severity of the issue and fostered collaboration and knowledge-sharing. To achieve sustainable resource management, the Parties of the Nairobi Convention must recognize IUU fishing as a significant threat and develop a comprehensive Regional Plan of Action. This plan should encompass legislative and regulatory measures for small-scale fisheries, improved communication, community-based management, and robust monitoring and enforcement.

By joining forces, implementing comprehensive strategies, and involving all stakeholders, we can safeguard the ocean and coastal resources, protect the livelihoods of communities, and pave the way for a sustainable and prosperous future in the WIO region. The time for action is now, and together we can make a tangible difference in the fight against IUU fishing.
A SHARED VISION TO TACKLE ILLEGAL, UNREPORTED, AND UNREGULATED FISHING

A watershed meeting of conservationists and policymakers from across the Western Indian Ocean (WIO) took decisive action in June to tackle the growing threat of illegal, unreported and unregulated (IUU) industrial fishing in the region.

The meeting, which brought together small-scale fishers, policymakers, NGOs and researchers from ten countries, focused on combating IUU threats to Madagascar, Seychelles, the Comoros and Mauritius. In a progressive step for fisheries leaders in this region, delegates at the meeting in Antananarivo resolved to adopt new measures to improve transparency, regional cooperation, surveillance and tangible enforcement in the sector.

Highest levels of IUU fishing

Fishing in the WIO underpins food security and jobs for up to 60 million people. Yet, these countries, several of which already suffer from high levels of poverty and food insecurity, experience some of the world's highest levels of IUU fishing, which represents a pervasive and growing threat to marine life, coastal livelihoods and food security.

Globally, one-fifth of seafood catches are estimated to be caught through IUU fishing, with estimates of economic losses to the WIO region of more than USD 500 million annually.

“IUU fishing is a global threat to fisheries and needs to be addressed with strong regional cooperation. Our symposium was a starting point for this, both for the benefit of the livelihoods of millions of fishers and for the sustainable management of fisheries,” said Naly Rakotoarivony, Head of Policy and Partnerships at Blue Ventures Madagascar, during the opening remarks.

Given the often international nature of IUU fishing – with many fleets crossing maritime boundaries on fishing missions – solutions require regional and international cooperation.

A regional strategy and network to tackle IUU

The meeting was convened by Blue Ventures in partnership with the United States Embassy in Madagascar and the Comoros; Madagascar's government department responsible for fisheries; and the University of Toliara's Institut Halieutique et des Sciences Marines.
It provided an important opportunity to design a regional strategy and network to tackle IUU. Discussions focused on how to improve monitoring and surveillance to identify IUU fishing, improving regional collaboration and transparency in fisheries management, and the potential benefits of new technologies and regulations.

Delegates shared the latest information on IUU fishing in each country and how collaboration is fostered between governments and civil society.

“It gives hope to see all of these actors, government representatives, civil society, regional bodies, and small-scale fishers in the same place sharing and engaging in action to combat IUU fishing,” added Rakotoarivony.

**Powerful testimony from small-scale fishers**

Small-scale fishers from Madagascar’s MIHARI network, who shared their experiences of the impact of IUU fishing, provided a powerful testimony of efforts being undertaken by coastal communities to protect coastal waters.

Pascal Mahata, a small-scale fishers’ representative from the MIHARI network, said: “We, small-scale fishers, confirm our commitment to work together with the authorities to ensure better governance of our marine resources and request that the resolutions taken during this symposium are properly implemented for the benefit of all actors.”

**The Fisheries Transparency Initiative**

Proposed resolutions from the symposium include the adoption of the Fisheries Transparency Initiative, fostering cooperation through increased data sharing between countries, and strengthening monitoring efforts through joint patrols, incorporating advanced technologies and building capacity.

Blue Ventures looks forward to further assisting Madagascar and other countries in the region to strengthen their surveillance of IUU fishing. It will do this with the participation of small-scale fishers to enhance fisheries transparency and support the rights of coastal communities to sustainably manage their fishing grounds.

*One of the panel discussions. © Blue Ventures*
As we come to grips with the challenges facing the marine and coastal ecosystems of the Western Indian Ocean (WIO) such as over-exploitation of resources, pollution, overfishing and climate change, it has become increasingly evident that concerted action is a pre-requisite to address them through effective cooperation and collaboration at the regional level.

In this regard, the Nairobi Convention’s Tenth Conference of Parties (COP 10) Decision COP10/5 called for the development of an ocean governance strategy for the Western Indian Ocean region, contributing to the African ocean governance strategy (COP10/5/1), and a related regional information management strategy. The development of these strategies is being supported by Nairobi Convention’s SAPPHIRE project, ACP MEAs 3 Programme and the WIOGI partnership project and is being led by the Regional Ocean Governance (ROGS) task force and an Information Management Strategy Multi-Stakeholder Working Group (IMS MSWG). Both ROGS TF and IMS MSWG have participated in highly participatory processes through collaborative technical dialogues to engage key stakeholders to provide input into the strategies. The two groups have been supported by the Collective Leadership Institute (CLI) and the Leibniz Centre for Tropical Marine Research (ZMT) and a support team from the Nairobi Convention Secretariat, GIZ and WIOMSA.

On 22-25 May 2023, the ROGS TF and IMS MSWG held a joint workshop on Collective Leadership, Technical Dialogues and a writeshop in Zanzibar to further develop the ROGS and IMS. The meeting took place at the same time as the Ninth Indian Ocean Dialogue on Innovation and Blue Economy hosted by the Indian Ocean Rim Association (IORA). The ROGS TF and IMS MSWG had been invited to participate to engage in technical dialogues on key topics that have been identified as priorities for the ROGS and IMS as well as the IORA Workplan.
In his opening remarks, Mr. Dixon Waruinge, the Head of the Nairobi Convention Secretariat, mentioned that “ocean governance is a necessary process to sustain the structure and functions of the ocean ecosystem.” Additionally, he said that the Nairobi Convention was delighted to partner with IORA and the Government of Zanzibar in the exercise, “to share experience from the entire Indian Ocean rim and to discuss how better to advance the development of the ocean governance strategy as the foundation of a sustainable blue economy in the WIO.”

Representing the IORA secretariat, Ms. Rina Setyawati, Director, Blue Economy and Fisheries Management, IORA Secretariat mentioned that the purpose of the meeting was to articulate and discuss challenges for effective implementation of blue economy projects. Ms. Setyawati acknowledged that advancing the blue economy agenda in the region remains “challenging and needs the collaboration of regional and international partners.”

The opening session was also attended by H.E. the Hon. First Vice President of Zanzibar Masoud Othman Masoud. H.E. Masoud, whose remarks echoed those of Mr. Waruinge and Ms. Setyawati, stressed the need to forge concrete blue economy partnerships and the political will to support their development. He also mentioned that there is a need to leverage community empowerment, capacity building, and sustainable blue economy financing for addressing topics such as pollution, conservation, and environmental security in the region.

Through the joint technical dialogues with IORA, both the ROGS TF and the IMS MSWG were able to include key actions in their respective strategies at the write-shop session of the workshop. The writing process involved several group work sessions, ‘World Café’ sessions for interactive exchanges and commenting on other groups’ discussion points, and consolidation of key points once general consensus was achieved. The collective leadership sessions were focused on stakeholder mapping while the joint sessions between the ROGS-TF and IMS MSWG enabled them to discuss possible linkages between the strategies and create an action plan and roadmap for onward development.
The ninth IORA dialogue concluded with the presentation of the “Zanzibar Consensus,” which recognized the participation and discussions around **four major themes: ocean governance and the blue economy, marine biotechnology and research, advancing IORA’s blue economy agenda, and financing the blue economy in IORA**. The ninth IOD further recommended further collaboration with international and regional organizations to enhance cooperation and effectiveness in achieving common objectives of ocean governance in the Indian Ocean region.

At the conclusion of the ROGS and IMS write-shop, it was evident that once finalized, the successful implementation of the two strategies will require collaboration and cooperation between and among key regional actors including the Regional Economic Communities (RECs), Regional Fisheries Bodies (RFBs), donors, financing institutions and other stakeholders such as NGOs and the private sector. Stakeholders in the ROGS Task Force, for example, proposed establishing (or strengthening existing) flexible institutional relationships, and high-level platforms for policy advice and finance, and implementing an ocean accounting framework for monitoring and evaluation.

Once the two strategies are finalized, the Focal Points of Nairobi Convention’s Contracting Parties will be requested to work towards obtaining a Decision at the eleventh Nairobi Convention Conference of Parties (COP 11) that will (i) take note of the ROGS and IMS and their recommendations; and (ii) decide on follow up mechanisms and institutional arrangements for implementation as recommended in the strategies, and prioritise activities to be undertaken.

For more information about these strategies, visit [nairobiconvention.org](http://nairobiconvention.org)

**Key Next Steps**

Output of group discussions during the IORA Technical Dialogue
Reef Conservation has developed the first citizen-science mobile app to enable community members to participate in the protection of mangroves in Mauritius and learn more about this critical ecosystem.

Called “Mangrove Matters”, the app is available for free on the Google Playstore. It aims to map mangroves around the island and collect baseline data on the various mangrove forests and the threats they face. Designed to be as user-friendly as possible, the app can be used by community members from all backgrounds.

Mauritius has lost 98 percent of its mangrove forest, with only about 45 hectares of mangroves remaining in the 1980s. Since then, restoration projects have increased mangrove coverage to approximately 181 hectares. However, this critical ecosystem is still impacted by anthropogenic activities and climate change. Reef Conservation took the initiative and launched the SOS Mangrove Programme in 2020, with the aim of better protecting and managing mangroves in Mauritius.

With the new Mangrove Matters app, Reef Conservation hopes to empower community members to actively participate in mangrove preservation in Mauritius and benefit from the new tool to learn more about this critical ecosystem, while scientists can also benefit from larger data collection capability.

For more information about the app and the SOS Mangrove Programme, visit the Reef Conservation website or email: admin@reefconservation.mu

Reef Conservation is a non-governmental organization (NGO) in Mauritius that has been active since 2004 in coastal and marine conservation and education. The NGO has implemented several scientific and sensitization projects and run initiatives that have enabled environmental sensitization and education of people of all backgrounds and ages, as well as increasing protection of the coastal and marine environment of Mauritius.

Some key projects of Reef Conservation include the creation and management of the first Voluntary Marine Conservation Areas in Mauritius, located at Anse la Raie and Roches Noires, and the implementation of the internationally recognized Eco-School and Young Reporters for the Environment programmes. Recently, Reef Conservation started working towards the restoration of three major marine and coastal ecosystems: coral reefs, seagrass beds and mangroves.
During the event, MPRU launched its official website www.marineparks.go.tz which showcases the ocean conservation work done in MPAs in Tanzania which contribute significantly to ocean protection and conservation in creating a future for the ocean as targeted by the United Nations’ Ocean Decade. Tanzania is also a signatory to the United Nations Convention on Biological Diversity and through these MPAs, contributes to the commitment to protect 30% of the ocean by 2030.

**A need for joint collaborative efforts at national, regional and international levels**

Speaking at the event, Hon Dr Mpango said that there is a need for joint collaborative efforts at national, regional and international levels in plans and finding ways to protect and conserve the ocean’s natural resources and manage the sustainable use of the ocean’s natural resources.
Dr Mpango added that Tanzania is one of a few countries in the world with an ocean area estimated to be 64 000 km², a 1 424 km-long beach area, and with a 223 000 km² exclusive economic zone.

**With the Blue Economy booming in Tanzania, there is a need to integrate ocean conservation and the Blue Economy in a balanced way to ensure the sustainable use of the ocean's natural resources.** Dr Mpango called on research institutions in Tanzania including the Tanzania Fisheries and Research Institute and the Institute of Marine Science to conduct marine research that opens up ways for ocean conservation.

Abdalla Ulega said that for Tanzania to have sustainable fisheries it could not escape the need for MPAs as these areas were crucial for the existence of sustainable fisheries in Tanzania.

He added that the Tanzanian Ministry of Fisheries and Livestock provided significant support to the activities of marine conservation and protection.

**About MPRU**

MPRU in the United Republic of Tanzania is a governmental authorized body under the Ministry of Fisheries and Livestock. As an institution dedicated to the conservation of the ocean and its protected areas, its main focus is on protecting marine habitats and advancing conservation within those designated areas. The United Republic of Tanzania has a total of three marine parks and 15 marine reserves. The main MPAs in the United Republic of Tanzania are Mnazi Bay and Ruvuma Estuary MPA, Tanga Coelacanth MPA and Mafia Island MPA.
NURTURING A NEW WAVE OF OCEAN CHAMPIONS

By Susana Kihia, Sarah Ater, Nina Wambiji, Jacqueline Uku, Juliet Karisa and Mwakiwiwi Mwachia

This week-long event featured several engaging activities that cut across diverse marine and environmental sectors. On 7 June, schoolchildren had the opportunity to visit the Kenya Marine and Fisheries Research Institute (KMFRI) and meet the scientists.

A total of 101 learners from Busy Bee School and Jedy’s Academy, two primary schools in Mombasa, explored concepts of the ocean ecosystem while engaging with the institute’s scientists.

Engaging presentations

The day started with a presentation on coral reef habitats by Dr Juliet Karisa, a coral reef scientist at KMFRI. Dr Karisa delved into the world of coral reefs, their significance for coastal populations, the challenges they face for survival and functioning, and the innovative conservation solutions underway to safeguard these vital ecosystems.

The presentation was brought to life by an immersive virtual reality experience that provided a simulated scuba diver’s perspective of these unique underwater habitats.

The children also toured the Ocean Literacy Centre and aquarium facilities where they had a firsthand experience observing different aquarium and pond fish species. A special section on seagrasses showcased fresh seagrass samples, allowing the children to touch and feel them. The tour included an extensive display of marine vegetation, with a noteworthy exhibition at the herbarium specifically highlighting mangroves, seagrasses and seaweeds.

A First-hand lesson in preparing for a deep-sea dive

The children visited the microscopic marine world at the biological laboratory. Here they viewed marine flora under the microscope, experiencing a vital component of ocean science in the laboratory.
They also received a firsthand lesson in the essentials of preparing for a deep-sea dive, including familiarizing themselves with the equipment and gear required.

A team of artists from Alliance Française Mombasa engaged the children in creating an outdoor billfish mosaic creation. Using recycled plastic material, the children helped to complete the billfish artwork by attaching bottle tops to the canvas.

**A highly relevant experience**

“The Institute has a variety of learning experiences. More schools need to learn about marine life,” commented one of the teachers present.

From the feedback gathered, the teachers emphasized that they considered the experience to be highly relevant for their learners. When asked what new knowledge they had learned, one of the youngest learners said, “Seagrass is a home for baby fish.” Other comments from the students revealed that they had gained a new understanding of coral reefs, overfishing, seaweed farming, and seagrasses. When asked about their favourite part of their visit, some of the learners highlighted the virtual reality experience, the art activity, as well as the laboratory interaction.

The immersive learning experience left a positive impression on the children, showcasing the incredible diversity of ocean science, and highlighting the importance of ocean literacy. It is necessary for the marine science sector to adopt a consistent practice of organizing similar events tailored to children, effectively communicating the wonders of ocean science. By doing so, we can inspire the younger generation to become passionate advocates for the ocean, nurturing a new wave of ocean champions.
Worryingly, overfishing and lack of information about the status of stocks are hindering efforts to achieve fisheries sustainability, and most of the fish stocks are in a long-term decline. Combined with other pressing threats, such as global environmental changes resulting in warmer waters, more frequent heatwaves and habitat destruction, depleted fish stocks might threaten the national economy, social well-being, and environment. Urgent action is thus required to ensure fisheries sustainability and adequate national marine resources management.

Marine protected areas (MPAs) have proved to be instrumental in protecting marine biodiversity and habitats critical to the survival of marine species. They provide essential functions, including serving as a climate change refuge, as well as generating a spill-over effect that is important for the replenishment of depleted fish stocks outside MPAs. These spill-over effects may play a crucial role in the local social economy of areas such as the Bazaruto Archipelago. Achieving MPA effectiveness in the light of climate change is one of the critical challenges facing the West Indian Ocean (WIO), as it is evident that this region is affected by an increased number and duration of climate-related extreme events, most recently by Cyclone Freddy.
ReMoTURB project focuses on strengthening fisheries and food security in Mozambique

The ReMoTURB project is a multi-stakeholder initiative that focuses on strengthening fisheries and food security in Mozambique through planning for climate change resilience within an MPA network. The Bazaruto Centre for Scientific Studies (BCSS) is privileged to be part of the ReMoTURB implementation and to work with Oceanographic Institute of Mozambique (formerly the National Institute for Fisheries Research), the South African Environmental Observation Network, the Nelson Mandela University in South Africa, and the University of Southampton in the United Kingdom in achieving project objectives.

The project aims to assess changes in physical oceanographic processes such as mesoscale eddies, water column thermal structure, looking at potential impacts on coral reef and seagrass systems as well as associated fish communities, all by using modern technologies and highly professional expertise.

The first part of the project took place in the Bazaruto Archipelago National Park (BANP) in March 2023, with BCSS as the host, logistics provider, and an implementing scientific partner on the ground. The project was further supported by the National Administration for the Conservation Areas and African Parks, who will benefit from the databases generated to incorporate findings into their research management plans, and policymaking decisions. Such multidisciplinary projects are essential to understand complex oceanic processes affecting ecosystem services, and ultimately resources exploited in Mozambique.

Array of observation mooring stations and sensors successfully deployed

During the 14 days that BCSS hosted the first cruise leg, an array of observation mooring stations and sensors were successfully deployed, including high-resolution thermistors (both shallow water and shelf-breaking arrays) that are designed for collecting data on water column temperature and currents. Some of the thermistors were paired with an acoustic doppler current profiler, which measures current speed and direction. Ultrasonic sensors were permanently established at strategic points. These stations will remain deployed for 14 months to detect and shed light on water upwelling and marine heatwave events in the area. The in-situ data will be combined with remote sensing time-series data to pair physical with biological oceanography via productivity (Chlorophyll a) and gain a wider understanding of the system.

An automatic weather station was installed at the BCSS communications tower premises for the meteorological measurements that will help to better understand ocean–atmosphere coupling that influences upwelling, climate change, day-to-day variability and extreme events.
A conductivity, temperature and depth unit was used for the hydrographic surveys, measuring vertical profiles of temperature, salinity, depth, oxygen, chlorophyll-a concentration, turbidity and photosynthetically active radiation. This instrument was deployed in various transects in the BANP to understand physicochemical and biological properties distribution over time and space.

**Coastal wind-driven upwelling and offshore mesoscale eddies**

High resolution data obtained by and in collaboration with BCSS will be used to investigate coastal wind-driven upwelling and offshore mesoscale eddies for the first-time – events fundamental for bringing cold and nutrient rich waters from the great depths to the surface, and directly contributing to the ocean productivity that is essential for biodiversity and biomass.

The fish biodiversity of coral reef and seagrass ecosystems was assessed using stereo baited remote underwater video (BRUV) sampling. The technology uses a pair of video cameras with a small canister of bait attached to the camera frame to attract fish. The BRUVs technology is non-destructive, allowing it to be used in marine parks or sensitive habitats. The use of video cameras in stereo allows for accurate and precise estimates of fish lengths, which enables accurate estimates of the weight (biomass) and life stage of each animal. Hundreds of hours of footage were collected, which, once analysed, will be used to determine the relative abundance of fishes and biomass estimations.

Fieldwork was conducted in extremely challenging weather conditions as the archipelago has just experienced a major cyclone, and swells were 2 m to 3 m each day. However, the BCSS professional logistics and research team confidently handled the environmental challenges enabling smooth deployments for the ReMoTURB project.

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**Project will inform future conservation planning in Mozambique**

The project will inform future conservation planning in the area by assisting in the proposal of new or extension of existing MPAs along the entire coast of Mozambique. BCSS contributes towards these conservation goals through logistical, operational, training and analytical support at the individual MPA scale, as part of broader efforts to conserve and protect biodiversity of the WIO region.

Prof Michael Roberts (head of the United Kingdom-SA Bilateral Research Chair in Ocean Science and Marine Food Security) talks about how to predict what the WIO will look like from now until 2100, in an [interview](#) with Nelson Mandela University.

From more information contact: info@bcssmz.com; Ekaterina Kalashnikova ekaterina.kalashnikova@bcssmz.org and Dr Mario Lebrato mario.lebrato@bcssmz.org
As part of the Coastal Populations and Ecosystems Resilience in the south-west Indian Ocean (RECOS) project, the Indian Ocean Commission (IOC) has opened applications to the Exchange of Experiences Programme.

The Exchange of Experiences Programme strives to strengthen the capacity of coastal and marine management stakeholders of IOC member states through funded fieldwork sessions. This activity capitalizes on the success and enthusiasm generated by the Exchange of Expertise Programme initiated by the Sustainable Management of IOC Coastal Zones project (GDZCOI) from 2014 to 2018.

“There is a latent demand for exchanges and a real added value for the dissemination of engineering practices aimed at improving the resilience of coastal ecosystems of IOC countries,” comments Anfani Msolli, Head of the IOC’s Ecological and Energy Transition, Tourism and Migration department.

“The Exchange of Experiences are authentic initiatives of regional cooperation, solidarity and peer capacity building because they bring tested solutions or ideas that are adapted to the local context,” he adds.

Who is the programme aimed at?

The Exchange of Experiences Programme is aimed at any integrated coastal zone management actors from the Comoros, Madagascar, Mauritius, or Seychelles who is directly involved in an action that is relevant to any of the RECOS project themes. These themes include the management and effectiveness of marine protected areas (MPAs), essential coastal ecosystems (mangroves and seagrass beds), the land–sea continuum, and environmental education in coastal areas.

“Unlike traditional training, this programme focuses rather on field practices; the transfer and concrete application of knowledge that has already demonstrated environmental, socioeconomic and cultural benefits,” explains Elisa Piat, the RECOS project’s Exchange of Experiences Programme officer.
“The requests must reflect a real need for expertise and the transfer of skills to which the stakeholders wish to respond through concrete on-site actions”, she adds.

Successful applicants will visit a demonstration site

On a voluntary and partnership basis, the applicant will benefit from the experience of a peer in the region. The stakeholders will be able to share their experiences by meeting on a demonstration site, thanks to the sponsorship of all travel costs. For example, some members of the Comoran non-governmental organisation AIDE will be able to visit a reef restoration pilot site run by the IHSM in Tuléar, Madagascar. All travel costs will be covered by the programme.

Every applicant will be provided with scoping documents and the required information. The applicants themselves will define the period, the expertise, and the theme of the exchange they request to address local challenges.

Programme will run from May 2023 to May 2026

The programme will remain open throughout the duration of the project, from May 2023 to May 2026, with applications being processed as they are received.

The RECOS project aims to strengthen the resilience of coastal populations against the effects of climate change by restoring coastal ecosystem services. It is implemented by the IOC and co-funded by the Agence française de développement and the Fonds français pour l’environnement mondial (FFEM).

More information on the Exchange of Experiences Programme, can be found here.
The workshop took place from 27–29 April 2023 in Mahé. RECOS contributes to strengthening regional scientific cooperation in the restoration of coastal ecosystems.

To achieve this, the project works closely with renowned scientists as well as national representatives through a scientific committee and thematic working groups. Together, they focus on common regional issues such as the management of marine protected areas (MPAs), protection and restoration of marine and coastal ecosystems (mangroves and seagrass), land-sea continuum, and environmental education in coastal areas.

“Together, as a team, we can definitely achieve our objectives and help to strengthen both the regional and national governance of the coastal and marine ecosystems in the Indian Ocean,” said Tony Imaduwa, the Principal Secretary of the Climate Change and Energy Department.

“Furthermore, we can assist each other to implement the innovative project ideas that will help to restore and use these coastal and marine ecosystems in a more sustainable manner.”
One of the workshop’s objectives was to enhance the structure, planning, and work of the Western Indian Ocean Mangrove Network (WIOMN) and the Western Indian Ocean Seagrass Network (WIOSN).

“Through these exchanges, we hope to share this valuable expertise with other actors in the region and provide an overview of the various initiatives related to the conservation of essential marine and coastal ecosystems underway in our region,” said Christophe Legrand, Regional Coordinator of the RECOS project.

Participants who attended the workshop included Seychellois stakeholders (Seychelles Conservation and Adaptation Trust, Seychelles Island Foundation, Seychelles Parks and Gardens Authority, Red Conservation, Research National Aires, GVI Seychelles, private consultants), the Fonds français pour l’environnement mondial (FFEM), the Blue Economy Research Institute, International Union for Conservation of Nature, national representatives from the Comoros, Madagascar, Mauritius, and Seychelles, as well as experts from Kenya and the United Republic of Tanzania.

Concrete examples and best practices

Participants shared their experiences and enriched their knowledge about mangroves and seagrass conservation. Action plans were developed to support WIOSN and WIO MN activities. Participants also had the opportunity to see concrete examples and best practices in Seychelles as part of a field trip to the Ramsar site in Port Launay, and Anse aux Pins, where they assisted in a demonstration of mangrove conservation methodologies and seagrass bed monitoring.

In 2023, RECOS organized two other regional exchange workshops. In February in Mauritius, on the evaluation of environmental education programmes implemented in the Indian Ocean Commission (IOC) countries, and in March in Madagascar on the effectiveness of MPAs. These exchanges helped build the capacity of regional actors, including members of the Western Indian Ocean Marine Protected Areas Management Network (WIOMPAN), in the use of the IMET tool, and the Sandwatch methodology. (Sandwatch is a UNESCO educational process through which school students, teachers and local communities work together in the field to monitor their coastal environments; identify and evaluate the threats, problems and conflicts facing them; and develop sustainable approaches to address them.)

The meetings also allowed the identification of research areas and the development of regional roadmaps for each thematic working group.

The RECOS project is implemented by the IOC and co-funded by the Agence française de développement (AFD) and the FFEM. It aims to strengthen the resilience of coastal populations against the effects of climate change by restoring coastal and marine ecosystem services.
The Wildlife Conservation Society (WCS) is implementing the Miamba Yetu: Sustainable Reef Investments programme as part of its efforts to conserve and protect coral reefs in Kenya and Tanzania – including the Zanzibar archipelago.

The programme is funded by the Global Fund for Coral Reefs (GFCR) that was launched in 2021 as the first-ever blended finance instrument dedicated to coral reefs.

**Initiatives that directly or indirectly benefit coral reefs**

Miamba Yetu aims to support initiatives that directly or indirectly benefit coral reefs, with catalytic investments in the form of concessionary debt and equity. A proportion of grant funding is also provided to further de-risk investments and improve returns for businesses. Projects that could benefit from the programme include those supporting sustainable coastal tourism, land-use and fisheries management, improved coastal waste management and blue carbon initiatives.

Thus far, the programme has developed a pipeline of bankable projects that will be considered for financing through a dedicated investment company. WCS is merging its experience in marine conservation with the financial expertise of Okavango Capital Partners to establish this special purpose vehicle to attract and blend various sources of capital for onward financing to businesses.

This financial mechanism will be a pioneer model for delivering sustainable finance and incubating smaller-scale investments that economically benefit local people while directly contributing to conservation outcomes for reef systems.

Miamba Yetu will explore more opportunities throughout the region in 2023. Businesses and development organizations that have the potential to improve WIO’s coral reefs and require financial support to achieve this are encouraged to contact the programme director at falguthmy@wcs.org.

For more information about the Global Fund for Coral Reefs, visit https://globalfundcoralreefs.org/
Experts and government representatives from the Western Indian Ocean (WIO) region recently gathered to identify research and management priorities and encourage the emergence of regional cooperation for dugongs in the south-west Indian Ocean (SWIO).

At the 12th WIOMSA Symposium, a special workshop was organized on “Progressing Dugong and Seagrass Conservation in the Western Indian Ocean” by the United Nations Environment Programme and Convention on the Conservation of Migratory Species of Wild Animals, Dugong Memorandum of Understanding.

The non-governmental organization Naturalistes de Mayotte heads the National Action Plan (NAP) for dugong in Mayotte from 2021 to 2025. The main objectives of this NAP are to limit the mortality of individuals by acting on the direct threats to dugongs and to improve knowledge of the species and its habitats.

To achieve this, the association is carrying out several flagship initiatives, including fisher investigations, aerial drone surveys of areas frequented by dugongs, a study of Mayotte seagrass, genetic studies, raising community awareness, and regional cooperation for the conservation of the species.

In most areas of the region, the dugong population has suffered from overfishing and has reached a level close to extinction. The small size of the population – less than ten individuals – is detrimental to the survival of the dugong population in Mayotte. However, information on dugongs in the various territories is scarce. This lack of knowledge about connectivity and natural migrations in the SWIO is an important argument in favour of a regional project.
Actions in each territory about potential ecological connectivity

The aim is to carry out parallel actions in each territory about potential ecological connectivity to obtain similar data and strengthen exchanges on the technical and scientific aspects of regional dugong management. The project, led by Naturalistes de Mayotte, is co-financed by the European Union as part of the European territorial cooperation programme INTERREG V Indian Ocean.

A survey of fishers in Mohéli, Comoros, was undertaken to identify dugong observation areas, and a map of target sites for dugong conservation in Mohéli was created. In April, a mission to Mohéli was undertaken in partnership with the Mohéli National Park, the University of Mayotte, the Mayotte Natural Marine Park and DroneGo Mayotte.

Training to pilot drones to monitor the dugongs

Mohéli Park staff have been trained to pilot drones so they can monitor the dugongs. Simultaneously, an aerial surveillance campaign of the dugongs was carried out to identify the sites the dugongs frequent.

The rangers were also introduced to methodologies for monitoring seagrass and the data management protocols set up in Mayotte. These training sessions will help standardize methodologies for monitoring dugongs and seagrass beds in the region, by providing reliable and comparable spatial and temporal data.

Detecting dugongs using environmental DNA

A method for detecting dugongs using environmental DNA has also been developed. Field tests have begun using new technologies, including innovative filtration pumps, and water samples have been collected in Mohéli and Mayotte. These samples will be analysed to detect dugong DNA and to identify the sites where they live.

Exchanges between the islands is ongoing and collaboration is being considered with Madagascar National Parks for the conservation of dugongs in that country's protected areas.
REVOLUTIONIZING SEAWEED FARMING THROUGH MICRO CREDIT AND SAVINGS SCHEMES

| By Nancy Iraba and Jerry Mang’ena |

In the southern coastal town of Kilwa Kivinje, on the coast of the United Republic of Tanzania, a remarkable blue transformation is taking place. Fifteen women seaweed farmers known as “Mashujaa wa Mwani”, which translates to “Heroes of Seaweed”, have been empowered to conduct deep-water seaweed farming using tubular net technology, making them pioneers in the use of this novel approach in the country.

The Aqua-Farms Organization (AFO) is implementing a project titled “Sustainable Blue Microcredit for Seaweed Women Empowerment” in collaboration with the SeaPower organization to scale up deep-water seaweed farming technology. It will offer finance solutions, including equipment microcredit and microsaving schemes to women seaweed farmers to boost marketing opportunities of the seaweed harvested.

The project is supported by Ocean Risk and Resilience Action whose mission is to drive at least USD 500 million into coastal and marine natural capital, service at least 50 novel finance products and build the resilience of at least 250 million climate-vulnerable coastal people adapting to climate change by 2030.

Training in the intricacies of deep-water farming techniques

From 4–7 May 2023, the Mashujaa wa Mwani seaweed group gathered for an intensive training session facilitated by the esteemed Dr Flower Msuya from SeaPower, who is also the founder of the Zanzibar Seaweed Cluster Initiative. Two experienced local seaweed farmers from Unguja where deep-water tubular seaweed farming is already practiced, provided guidance, enhancing peer-to-peer learning.

The four-day training programme delved into the intricacies of deep-water farming techniques such as tubular net and line seaweed farming. The women were equipped with the knowledge and
Spearheading a sustainable revolution in seaweed farming

By embracing deep-water farming techniques such as tubular net technology and line farming, these empowered women are spearheading a sustainable revolution in the seaweed farming industry. Their pioneering efforts are not only transforming their lives but also inspiring others in the community to follow suit.

Seaweed farming also serves as a catalyst for social change, fostering gender equality and uplifting the entire community. By providing women with opportunities and resources, this project is creating a ripple effect that will resonate for generations to come.

A similar project in Pemba

The impact of this project goes far beyond the boundaries of the “Mashujaa wa Mwani” group, as similar support has benefited the “Wema Hauozi group”, a group of seaweed farmers in Pemba Makangale village who will be expanding their seaweed farms from 1 acre to 3 acres and tripling their yields and returns.

After this project, the AFO hopes to mobilize private and public funding through a blended finance approach to support more women farmers with microcredit and saving schemes.

Spearheading a sustainable revolution in seaweed farming continues...
Une toute première feuille de route pour renforcer les compétences des gestionnaires d’aires marines de l’océan Indien occidental

| Par Sevahnee Pyneeandy


Le but de cette rencontre? Définir des actions communes entre ces 3 initiatives pour renforcer les compétences des gestionnaires d’aires marines de la région océan Indien occidental (OIO).

La rencontre a réuni plus de 40 participants de 7 territoires de l’océan Indien occidental: Madagascar, Comores, Mayotte, La Réunion, Ile Maurice, Ile Rodrigues et Seychelles.

Pendant 5 jours, les gestionnaires d’aires marines protégées, localement gérées et de conservation volontaire ont eu l’occasion de se rencontrer parfois pour la première fois, d’apprendre à se connaître, de réfléchir sur les pistes de recherche autour de l’efficacité de gestion des aires marines protégées de la région, d’identifier leur expertise et d’exprimer leurs besoins pour mener à bien la gestion de leur aire marine.

« Ce que je sais déjà faire », « Ce que j’aimerais améliorer », « Ce que j’aimerais développer »... Les échanges basés sur ces questionnements à l’échelle de chaque aire marine de la région, ont permis de dresser un tableau de l’expertise disponible dans chaque territoire. Une liste des besoins a également
émérégé de ces réflexions, ainsi que les outils à mettre en œuvre pour y répondre. Concrètement, il s’agit d’échanges entre pairs (compagnonnage ou mentorat), d’ateliers thématiques, de formations ou de journées d’échanges techniques qui seront proposés pour accompagner les gestionnaires.

Communiquer avec les élus, s’assurer de l’implication et de la participation des communautés locales, améliorer les capacités interne de gestion, mettre en place les protocoles de suivi et restaurer les grands écosystèmes (herbiers, mangrove, récifs coralliens), délimiter son aire marine, valoriser la communication autour de son aire marine ou encore développer des activités génératrices de revenus pour l’aire marine et les communautés associées : telles sont les actions prioritaires identifiées par les participants, permettant ainsi de poser les bases d’une feuille de route commune pour WIOMPAN, RECONS et Varuna.

Cet atelier a également permis d’élaborer les plans d’action respectifs des projets Varuna et RECONS, tout en identifiant les actions à mettre en œuvre pour dynamiser et assurer une meilleure représentativité des territoires insulaires de l’OIO au sein de WIOMPAN.

Profitant de la mobilisation des gestionnaires pendant ces journées, une formation IMET (Integrated Management Effectiveness Tool), outil d’évaluation de l’efficacité de gestion des aires protégées, était organisée par le WIOMSA et le WIOMPAN, avec le soutien de RECONS et Varuna.

Les praticiens des AMP/ LMMA/ VMCA de l’OIO ont été formés à l’utilisation de l’IMET et ont été familiarisés à la mise en œuvre de l’évaluation de la gestion des zones protégées (PAME) dans les îles. L’objectif global était de les aider à conduire le PAME de leurs aires marines. À la fin de la formation, les participants ont acquis suffisamment de connaissances et de compétences pour utiliser l’IMET de façon indépendante et présenter l’outil à leur structure afin de décider s’ils souhaitent ou non le déployer dans leur réseau d’aires protégées et conservées.

Forts de ces journées d’échanges, et se basant sur la feuille de route maintenant construite, Varuna, RECONS et WIOMPAN vont déployer les actions de montée en compétence à destination des gestionnaires d’aires marines protégées et conservées de la région. Un compte-rendu synthétique de ces journées d’échanges est disponible, ainsi que livrables consultables sur ce lien : https://padlet.com/internationalrnf/journ-es-d-echanges-techniques-wiompan-recos-varuna-2pkgbmn8b0xq4ug

Pour plus d’informations, contactez Sevahnee Pyneeandy: sevahnee.pyneeandy@rnfrance.org ou Emmanuelle Sarat emmanuelle.sarat@rnfrance.org

Read the article in English
Download the event summary report here
The deliverables are available here
The potential to advance seafloor mapping and ocean exploration

By Francesca Adrienne and Denis Hains

The hydrospatial domain combines parameters such as bathymetry, bottom, sub-bottom, water column, surface and atmosphere; physical, biological and chemical parameters which can be visualized using Geographic Information Systems (GIS) and satellite, airborne, automated and in-situ remote sensing data, offering a more comprehensive understanding of our ocean’s seascape and its coastal zone landscape.

Hydrospatial does not replace hydrography but expands it

It is important, however, to clarify what hydrospatial is and what it is not: it is not replacing hydrography but expanding it.

The hydrospatial domain, at its core, is about harnessing the power of blue geospatial+ data, information, and knowledge related to the spatial and temporal aspects of our water bodies and their contiguous zones. It provides a multidimensional and temporal view of the underwater world and its contiguous zones, enabling professionals, researchers, policymakers and stakeholders to make informed decisions and effectively manage “all the blue of our Blue Planet and its contiguous zones”.

However, hydrospatial should not be seen as a replacement for hydrography but rather as a broader context that includes it, as well as all other disciplines, such as marine geology, marine biology, oceanography, ports management, fisheries, commercial shipping and more, for better knowledge, understanding and sustainable management of the marine environment.

Seafloor mapping is a vital step in unlocking the mysteries of our oceans

By accurately mapping the seafloor, we gain valuable insights into its topography, geomorphology, and associated hazards. Hydrospatial elements, such as bathymetry, 3D models, artificial intelligence, digital twins and GIS, play a crucial role in its monitoring and management. These amongst many others allow us to create detailed visual representations, such as maps, that highlight changes in depth, identify submerged objects, and assess potential risks to navigation, the environment, and its marine resources.
One of the significant advantages of considering the hydrospatial domain is its ability to integrate different layers, including the primary seafloor data. By combining bathymetry with hydro-referencing, 3D visualization and terrain analysis, we can enhance the value of that data, facilitating a comprehensive understanding of the seafloor environment, and enabling us to explore the interactions between underwater features and their impact on currents, wave patterns and other phenomena.

However, the hydrospatial domain extends beyond seafloor mapping. It has a broader extent, such as coastal zone management, urban planning, environmental management and other domains that require a good understanding of water bodies and their surrounding areas. By leveraging the hydrospatial domain and its associated technologies, we can make informed decisions about coastal development, conservation efforts and resource management. The power of the hydrospatial domain lies in its ability to provide a holistic view of our Blue Planet. It encompasses not only the oceans but also lakes, rivers, estuaries and other water bodies. The hydrospatial sciences, as a subset of geospatial sciences, focus on collecting and analysing multi-dimension spatio-temporal data related to these water bodies. This comprehensive approach allows us to study the interconnectedness of aquatic ecosystems, monitor changes over time and develop sustainable management strategies.

It is important to note that the hydrospatial domain is an evolving field. The term itself has gained traction and support and is now adopted within the ocean science community. It is essential to clarify that hydrospatial is not intended to replace hydrography or undermine the valuable contributions of the hydrographic community, but it should be used instead of using “marine geospatial” or “marine spatial”. It complements and enhances our understanding of the marine environment.

The hydrospatial domain is advancing seafloor mapping and ocean exploration by providing a more comprehensive and integrated approach to studying our underwater world. By leveraging the power of data, information and knowledge, the hydrospatial domain empowers us to make informed decisions, protect our oceans and their contiguous zones and ensure the sustainable use of marine resources.

For more information please contact:

Francesca Adrienne tammyadrienne@gmail.com
Denis Hains dhains@h2i.ca

A holistic view of our Blue Planet
WHERE TO FISH IN THE FOREST?  |  By Mark Huxham

Fishing immediately adjacent to the mangrove forest, or even within it during high tide, often produces high densities of juveniles. Research that uses chemical signals to identify the juvenile habitats and diets of adult fish caught offshore often pinpoints mangrove markers.

Despite this, much remains unknown about the importance for fish of particular forests, and particular sites within them. Recording fish inside the forests is hard work as you cannot use traditional methods like seining. When this is done, for example, using stake nets or with video surveys, there is typically very high variability. Some sites show high densities and some show no fish at all.

Does this variability reflect predictable features of the forests, or is it just statistical noise? That was the first question we hoped to answer in, “Where to fish in the forest? Tree characteristics and contiguous seagrass features predict mangrove forest quality for fishes and crustaceans”.

Factors that govern the variety and population size of marine wildlife

Understanding what determines the diversity and abundance of marine fauna at any particular place may require more than just knowing about the site itself; it may also depend on the surrounding habitats, through which mobile marine animals regularly move.

We know that seagrass is also important for juvenile fish, so we also looked at seagrass extent and distribution to see if that could help explain the fish and crustaceans found in mangroves.
Total fish catches declining in Vanga Bay, Kenya

Vanga Bay, on the far southern coast of Kenya, supports extensive mangroves, seagrass and coral reef and is the most important fisheries landing site in southern Kenya. However, total fish catches are declining here, with potentially serious implications for the local population.

We established 14 sites in similar-sized creeks across the mangrove forest and took repeated samples of fish and crustaceans over two years, yielding a total of 1,879 fishes and 1,132 crustaceans belonging to 59 and 16 species respectively. Less than 1 percent of the fish caught were classified as adults, confirming the usual pattern of juveniles found in mangroves.

There were large and consistent differences between sites, with some having significantly higher catches of fish or crustaceans than others, regardless of season. However, these differences were not ranked similarly for fish and crustaceans. Instead, sites that were typically very good for fish were often amongst the worst for crustaceans and vice versa.

What explained these differences?

We measured the forest characteristics, such as tree density, height, and species number; and the seagrass characteristics, such as the total area and configuration, that corresponded with each site. Sites with large, mature trees and less seagrass, and more open sediment were the best for shrimp. Sites with smaller, dense trees and abundant seagrass supported the highest numbers of fish.

The Kenyan Mangrove Ecosystem Management Plan suggests the zoning of mangrove forests in Kenya into different use areas, for example, for extraction, fisheries and carbon capture. But any simple designation of an area as “good for fish” may well exclude shrimp and vice versa.

Our work shows that maintaining the value of the forests for both fish and crustaceans requires recognizing them as complex mosaics, connected to a seascape that includes offshore habitats such as seagrass.

This paper is dedicated to the memory of our lead author, Dr Caroline Wanjiru, who sadly died before it could be published.
The future effectiveness of community-based conservation is likely to be significantly impacted by 15 key emerging topics, according to a recent article in *Trends in Ecology & Evolution*

The topics highlighted reflect a horizon scan coordinated by the Wilder Institute and a collaboration of 39 conservation practitioners. The study pulled input from an online survey with responses from 1175 individuals across 109 nations and a diversity of knowledge and experience.

Horizon scans are undertaken to seek out the next big things to come, ultimately to guide proactive strategies to take advantage of new opportunities and address threats while they are still manageable. Understanding these emerging issues and what they mean for the WIO can help to define a common future vision.

Several of the topics are relevant to the WIO context and can be used to guide future actions to improve locally managed marine protected areas (LMMAs) in Kenya, Tanzania, Mozambique and Madagascar, and develop initiatives to increase community engagement in other WIO countries that heavily rely on national government-led conservation initiatives.
**Expand marine protection efforts**

Two of the topics, “Global target to conserve 30 percent of Earth by 2030”, and “Global ecosystem restoration commitments” reflect plans by the Conference of Parties to the United Nations Nairobi Convention to expand marine protection efforts and use restoration to rehabilitate degraded habitats.

Based on the “Marine Protected Areas Outlook” report published in 2021, only 173 LMMAs have been officially recorded. However, it is presumed that establishing LMMAs will increase and improve as the WIO countries and other partners continue working towards expanding and establishing MPA networks.

**Diversifying conservation-compatible livelihoods**

In Tanzania and Zanzibar, marine conservation efforts are implemented primarily through marine parks managed by the national government, and some privately managed reserves. While LMMAs (for example, community or fisheries-managed areas) exist, they have been found to be largely ineffective, with maintenance fizzling out once assistance from external donors ends.

Reviving old and establishing new LMMAs in the United Republic of Tanzania would require identifying and diversifying conservation-compatible livelihoods to encourage and sustain such initiatives, perhaps including (but not exclusively) tourism. Tourism, which can support conservation through conservation fees is a major economic stream for Tanzania. However, travel and tourism dramatically decreased during the COVID-19 pandemic; heavy dependence on tourism alone, therefore, is not advisable. Nonetheless, changes in tourism and travel patterns mean that the Tanzanian government and communities could consider unconventional tourism opportunities, such as agri-tourism, cultural immersion, and wellness stays.

**Value of climate-smart approaches in Madagascar**

In Madagascar, LMMAs are largely community-led and organized. In 2004, the country’s first LMMA was established with an octopus closure. The closure resulted in octopuses dramatically increasing in size and number, motivating neighbouring communities to do the same and growing the LMMA network across the country.

Today, more than 17 000 km2 of Madagascar is managed through roughly 250 LMMAs. One of the topics key to community-based conservation’s future effectiveness speaks to the value of climate-smart approaches to agriculture, aquaculture and fisheries to enhance the sustainability and climate resilience of food production systems.

Octopi are short-lived, fast-growing and easily adapt to environmental change. The fishing methods used produce minimal bycatch, making the octopus fishery potentially more environmentally sustainable under climate change than finfish fisheries, which are mostly fully or overexploited.

Creating knowledge together across disciplines and cultures, another highlighted topic, is also relevant to Madagascar. Although not a new concept, knowledge co-creation with local and Indigenous stakeholders is increasingly being valued, and renewed interest should help the respectful interweaving of knowledge systems, support cultural revival, and facilitate genuine community-based conservation.

Madagascar is now working on the legal recognition of LMMAs and the community-defined Malagasy term, “Lamina enti-Mitantana ny Morontsiraka sy An-dranomasina” is being widely adopted.

Such successes need to be expanded across the WIO, with each country encouraged to define its own form of community-based natural resource management and national network. In doing so, it will be helpful to keep in mind key topics emerging on the horizon.
Coral reef restoration projects are becoming a popular corporate environmental responsibility activity at hotel resorts. Unfortunately, these projects are often public relations-heavy but scientifically light.

The main problem is that the hotel staff do not monitor the restored reef over time to quantify the success or failure of the restoration activity. There is also a lack of user-friendly monitoring methods for hotel staff that are robust enough to detect changes over time.

To solve this monitoring problem, the team at Nature Seychelles restored a patch reef at Petite Anse Kerlan, at the Constance Lemuria five-star resort in Praslin Island, Seychelles. Before the mass coral mortality caused by the 1998 El Niño–Indian Ocean Dipole, the exposed sandy bay of Petite Anse Kerlan contained a diverse shallow-water coral reef. Since the 1998 coral bleaching event, the patch reef has been unable to recover on its own.

Low-tech method developed for monitoring

The Nature Seychelles team have now published a new low-tech method it developed for monitoring the survival and growth of coral transplants. The method is easy to implement by staff without scientific training, using the standard resources available at a hotel resort.

The term “boutique restoration” was coined by Nature Seychelles for a restoration tailored to a hotel resort’s needs, while complying with the science-based principles of ecological restoration. Here the restored patch reef had to be accessible to hotel guests by snorkelling (1 m to 3 m depth), and within 50 m of the beach, which is the length of an Olympic-sized swimming pool.

The branching and tabular, massive, and encrusting corals transplanted at Petite Anse Kerlan were raised by the Nature Seychelles Reef Rescuers team in midwater ocean nurseries within the Cousin Island Special Reserve. The coral fragments raised in the nurseries were survivors of the 1998 mass bleaching event, found at two nearby patch reef donor sites. The nursery corals were attached to the sea bottom at the restoration site using a special cement mix developed by Nature Seychelles.
Coral reef restoration by the tourism sector is possible

The method used

The corals transplanted were photographed with a reflective square tile in the field of view. An underwater map of the site allowed navigation and resighting of the monitored colonies. To monitor survival and growth over time, divers used the map and the reflective tiles, to find the corals and record status (alive, dead or bleaching) and took photographs. The coral size shown in the digital images was measured using open-source software. The low-tech monitoring method was good enough to detect the expected survival of coral transplants, with encrusting and massive corals outperforming branching corals at this shallow site.

Collaborating with the private sector

“Nature Seychelles has a long history of collaborating with the private sector for ecosystems and species restoration. We have helped island management and owners on Cousine, Fregate, Darros, and Denis islands, among others, to restore their islands. Important all these projects have been underpinned by sound science, and the methods made available as manuals and toolkits, with the results published in peer-reviewed journals,” says Dr Nirmal Shah, Chief Executive Officer of Nature Seychelles.

“Our new science-based user-friendly method is a game changer. It gives hotel resorts the monitoring tools they were missing, so they can now get involved as full partners in coral reef restoration worldwide,” says Dr Sarah Frias-Torres, lead author of the publication.

The work was funded through grants to Nature Seychelles by the United States Agency for International Development, and the Global Environment Facility, the United Nations Development Programme and the Government of Seychelles’ Mainstreaming Biodiversity Project.

For more information contact:

Liz Mwambui, Communications Manager, Nature Seychelles, liz@natureseychelles.org

Dr Sarah Frias-Torres, corresponding author, sfriastorres@gmail.com

A diver cements a nursery-grown coral using a pastry bag. Photo credit. © N. Thake
COMMERCIAL EXTINCTION OF GROUPER SPECIES IS A LOOMING RISK IN KENYA | By Lenjo Mrombo

Groupers are apex predators that play a vital role in marine ecosystems, and any decline in their populations can disrupt ecosystem stability. Overfishing and exploitation of spawning aggregations have been identified as major threats to grouper populations.

Concerns have arisen regarding the decline in grouper catches in Kenya, with several species listed as threatened or data deficient. *Epinephelus fuscoguttatus* is currently categorized as vulnerable (VU) from its previous near threatened (NT) category.

Limited information regarding the biological and ecological status of *Epinephelus fuscoguttatus* in Kenya hinders the development of effective management plans for the species. The primary objective of this study was to provide baseline scientific information on the biology of *Epinephelus fuscoguttatus* to aid in the formulation of effective conservation and management strategies.

**Two fish landing sites along the Kenyan coast monitored**

The study involved sampling activities conducted over a one-year period at two fish landing sites along the Kenyan coast: Shimoni and Mayungu. Various parameters were estimated, including exploitation rate, size at maturity (L50), gonadosomatic index (GSI), and fecundity. The results indicated that *Epinephelus fuscoguttatus* is currently being exploited at levels exceeding the optimum (E = 0.9).

The length at which 50 percent of males reached sexual maturity (L50) was determined to be 59.50 cm, while for females, it was 48.2 cm. The mean fecundity was estimated at 509,121 eggs per female per year. The gonadosomatic index exhibited its highest values in June and December, suggesting a protracted spawning period, although ripe females were observed in multiple months.

**Fishing activities targeting spawning aggregations**

The exploitation rate of *Epinephelus fuscoguttatus* was found to be unsustainable with fishing activities still targeting spawning aggregations. This is concerning due to the species’ late maturation and slow growth. Without effective management measures...
and increased awareness among fishers about the detrimental effects of targeted fish spawning aggregation fishing, the commercial extinction of *Epinephelus fuscoguttatus* is a looming risk, particularly as it is already classified as vulnerable.

**Recommendations to improve management**

To ensure the sustainability of this species, we propose several management improvements:

1. Robust enforcement of fishery management regulations, including the enforcement of legal fishing gears, is crucial.

2. Fishing of spawning aggregations should be prohibited, and protective measures should be implemented to safeguard fish spawning aggregation sites.

3. Fishing effort must be limited to levels that are biologically sustainable by reducing the fishing pressure on grouper populations that are more vulnerable compared to other reef species.

4. Additional monitoring and research efforts targeting grouper species are necessary to focus on population restoration. These actions are vital to ensure the long-term viability and ecological stability of *Epinephelus fuscoguttatus* in the region.

This work was funded through the WIOMSA MARG Programme.

**Available Here**
HIGHLIGHTS FROM RECENTLY PUBLISHED PAPERS

INDIGENOUS KNOWLEDGE IS IMPORTANT FOR EFFECTIVE MANGROVE CONSERVATION – THE CASE OF RUFIFI DELTA | By Loyce N. Ntibona, Mwanahija S. Shalli and Mwita M. Mangora

However, it is evident that local communities in different areas have not actively participated in conservation programme planning and decision-making due to several reasons.

The Tanzanian Forestry Policy of 1998 and Forest Act of 2002 emphasize participatory management to achieve sustainable forest management through the Participatory Forest Management (PFM) framework. The PFM has two strategies; Community-Based Forest Management (CBFM) and Joint Forest Management (JFM). In CBFM, a community becomes the forest owner and duty bearers of forest management, while JFM requires a community to sign an agreement with the government and other forest owners regarding forest management.

Sharing benefits and revenues

However, CBFM and JFM strategies in Tanzania have not been successful, not only in mangrove forests but in other terrestrial forest reserves where attempts have been made. This is because there are no clear or binding agreements on how forest benefits and revenues should be shared between the government and local communities.

JFM has enabled higher levels of local governance, particularly the functions of Village Natural Resource Committees (VNRCs) but fell short in improving the livelihoods of local communities participating in JFM, calling into question long-term sustainability.
An adequate understanding of drivers influencing community willingness to participate in conservation in the Rufiji Delta is important for designing and implementing effective community-based mangrove conservation.

**Key findings**

- The local community is ready to become partners in conservation programmes because they are natives of the area, with local knowledge of the Delta, and are the primary implementers of the initiated conservation activities. Local community participation reduces conservation costs in terms of time and money by eliminating the need for outside technical expertise and human resources.
- There is increased awareness of the importance of mangrove conservation as a result of several awareness training programmes by conservation organizations.
- Mangrove restoration was regarded as a key conservation activity initiated by several conservation organizations in the Delta.
- Community participation is contingent on incentives and benefits.
- Conservation activities should ensure the socioeconomic and sociocultural well-being of local communities, which are essential for maintaining conservation development.
- The age of the household head, education level, source of income and awareness of mangrove governing laws are significant factors and were positively associated with community willingness to participate

**Recommendation and management implications**

For effective conservation, it is important for responsible conservation authorities to recognize and include the local community in conservation activities.

The government should strengthen the implementation of participatory forest management approaches as emphasized by the National Forest Policy of 1998, the National Forest Policy Implementation Strategy of 2018–2028 and the Forest Act of 2002.

Local communities should be provided with incentives to encourage them to develop the capacity and desire to sustainably manage conservation programmes. These could include payment to mangrove planters, donation of livestock to poor households, rewards to reporters of illegal use, revenue sharing, the establishment of local mangrove protection teams and supporting training.

This study was jointly supported by UNEP Nairobi Convention through its GEF-funded project (WIOSAP) and the USAID-funded Sustainable Wetlands Adaptation and Mitigation Program (SWAMP).
The conference explored avenues for strengthening strategic cooperation within the continent, continued advocacy for the maritime sector, and implementation of policies and plans to support the growth and transformation of Africa’s Ocean Economy.

At the conference, Ambassador Nancy Karigithu, the African candidate for the position of Secretary-General of the International Maritime Organization Secretary-General, emphasized several key points in the maritime and marine sector. These included the significance of the Blue Economy in supporting Africa’s free trade initiatives, and embracing new technologies such as green smart ports, blockchain, big data and other advancements in African ports.

Youth and women development were key issues

With youth and women development as key issues, a session, “A responsive skills development model to support maritime growth”, had representatives from higher education and training institutions and the shipping sector in South Africa, Kenya and India, speak about, “Enhancing the potential of the employability of graduates through engagement between industry and academia, and African Seafarers Development”.

Although the presentation focused on seafarers, the information and development models were valuable for the youth and women in attendance. It was revealed that there are various opportunities available through higher education colleges that are partnering with the private sector to provide training, although there is space for improvement.

The conference was informative, with conversation among delegates about oil and gas exploration in African seas, the importance of Indigenous knowledge systems and stakeholder engagement in coastal villages, and the capacity of ports to implement and maintain sustainable port development and green technologies to reduce greenhouse gas emissions.

Dr. Obakeng Molelu, the Vice Chair of the Network for Women in Marine Science, represented WIOMSA at the meeting.

For more information on SAIMI visit https://saimi.co.za
There has been much talk of involving the private sector more meaningfully in ocean governance. The private sector is adopting innovations to improve sustainability, and meaningful dialogue is taking place on strengthening ocean governance. However, there is no doubt that more can be done to promote effective partnerships between the public and private sectors.

The “High-Level Panel for a Sustainable Ocean Economy” has emphasized that sustainability of the oceans can be achieved, “only if best practices are applied in both the public and private sectors, and where productive partnerships between the two are encouraged and advanced”. In our own region, the Nairobi Convention programme of work has similarly emphasized the importance of collaboration with the private sector.

Clearly, the intent is there. Why then, the lacklustre progress? Back in 2020, the Nairobi Convention Secretariat worked with a team to explore this question, and also offer a framework through which these challenges can be addressed.

Before going further, ask yourself, “What picture comes to mind when you think about the private sector?” Glitzy hotels on the shorefront, an international energy company drilling for oil, or hulking trawlers scooping up fish by the tonne?

These are indeed private sector stakeholders but so are the local entrepreneurs offering guided tours, the ramshackle beach restaurants buying their seafood from local fishers, and the eco-lodge with impactful environmental and social programmes.

Perceptions can be shaped by our biases and impede effective collaboration

This thought exercise illustrates two points: that the private sector is incredibly diverse across scales (from micro-entrepreneurs to global corporate behemoths) and across industries; and that our perception of stakeholder groups can be shaped by our worldviews and biases in ways that can impede effective collaboration.

If we see the private sector as inherently rapacious and profit-obsessed, that mistrust can colour our engagements with them. It cuts both ways; where private sector stakeholders see governments...
as uniformly inefficient and corrupt, and non-governmental organizations as out-of-touch moral crusaders, the likelihood of effective partnerships being formed is slim.

**Lack of trust a notable barrier to partnerships**

The team exploring partnerships with the Nairobi Convention was able to ask private, public, and civil society stakeholders about these issues, and it was clear that a lack of trust, while not uniform across all respondents, was nevertheless a notable barrier to a partnership.

There were other barriers too: the private sector is often seen as merely a source of funding by other stakeholders, and there is often a lack of common goals and vision among stakeholders involved in partnerships.

Rather than get caught up in the many barriers to effective partnership, it is perhaps best to focus on what is necessary to address the problem. In essence, this is what is laid out in the "**Strategic Framework for Private Sector Engagement in the Western Indian Ocean**", the outcome of the Nairobi Convention process we have been referring to.

The essence of it is that there is a need to shift towards partnerships that offer mutual benefits to all actors involved. Partnerships require time and resources, and private sector actors need to be able to justify the commitment of such resources to both internal (senior management, company boards, and so on) and external stakeholders.

**Strategic Framework lays out a structured process**

Another important area to focus on is shared problem-solving. Too often, private sector actors are only approached once a project is already underway. We must also recognize that not everyone will have the time, resources, or inclination to join a particular initiative. In some cases, we may work with individual companies, in others, working through industry associations might be more appropriate. Sometimes our partnership will be particularly relevant to a specific industry, and other times we will want to work across industries.

The Strategic Framework lays out a structured process through which to consider these issues. It is an extremely valuable resource and we encourage you to make use of it and share it through your networks.

**Supporting an inclusive and sustainable Blue Economy**

Many in the region will already be aware of the "**Our Blue Future**" initiative. This regional multi-stakeholder initiative places great emphasis on supporting an inclusive and sustainable Blue Economy in our region, and from day one has been explicit about the need to involve the private sector. It is very encouraging to see some of the ideas in the Strategic Framework finding their expression in such an important regional initiative.

There is a lot that can be done and we should all be exploring opportunities to build partnerships, big and small. Our own work on marine and coastal ecosystem-based adaptation has underscored the need for stronger partnerships in this area. The private sector is already involved, for example, through blended financing mechanisms such as the Global Fund for Coral Reefs.

The tourism industry also provides an opportunity for private sector investments in marine restoration. We are exploring these themes through our community of practice on marine and coastal ecosystem-based adaptation, which we would encourage you to join.
PROGRAMME MANAGER: SCIENCE AND POLICY

WIOOMSA has launched a new programme called “Sustainable Blue Future in the Western Indian Ocean - Institutional Strengthening through Science, Capacity, and Assimilation for a Sustainable Blue Future - SCALABLE” (2023-2026).

The programme aims to strengthen the WIO science-policy interface and increase the impact of the WIOOMSA’s Marine Science for Management (MASMA) programme to support the implementation of the Africa Blue Economy Strategy, with a focus on the WIO region.

WIOOMSA is looking for a Science-Policy Programme Manager to oversee the implementation of the SCALABLE Programme’s science-policy component. This position is in WIOOMSA, Zanzibar. Working under the overall supervision of the Executive Director, the incumbent will have a broad range portfolio of responsibilities aimed at helping achieve the ambitions outlined in the WIOOMSA Strategy Framework 2021-2025. Download the job description and terms of reference here: WIOOMSA Programme Manager: Science-Policy.

Application Process

Please send your application as one pdf file including a cover letter and your CV. Supporting documents can be added as considered relevant. Only shortlisted candidates will be contacted by 30th July 2023. Applications shall be addressed to: The Executive Director – secretary@wiomsa.org and copied to: the Corporate Services Manager, lilian@wiomsa.org. Don’t forget to mention Programme Manager, Science and Policy when applying.

THE DEADLINE FOR APPLICATIONS IS 21 JULY 2023.