Concept Note
WIO SYMPHONY Workshop for Marine Spatial Planning (MSP)
Zanzibar, Tanzania,
21 - 25 October 2024

A. Background

Coastal and marine ecosystems play a crucial role in supporting the livelihoods of coastal communities. They ensure food security and offer vast opportunities for a sustainable blue economy, including sectors such as tourism, shipping, fishing, and energy. Despite their importance, these ecosystems are increasingly threatened by unsustainable use, pollution, habitat degradation, and the impacts of climate change, driven by increasing human activities.

With the growing intensity of human activities in marine environments, there is a clear necessity for integrated management of coastal and marine resources. This can be effectively achieved through ecosystem-based and area-based management strategies. The environmental and social impacts of developments such as bioprospecting, waterfront development, oil and gas, as well as other extractive industries on the coastal zone needs better governance, integration, coordination and management of various sector activities, programmes and plans, by ensuring the sustainable development of coastal and marine areas and conservation of biodiversity and ecosystem services through the implementation of integrated coastal zone management taking into consideration issues of climate change.

Integrated coastal zone management (ICZM) provides a dynamic and participatory process that involves all relevant stakeholders aimed at planning, managing, conserving and protecting coastal and marine ecosystems and resources; taking into account their fragility and sensitivity, interactions, the nature of uses as well as their impacts with a view to ensuring sustainable development. The September 2023 ICZM Protocol of the Nairobi Convention provides that the geographical coverage of the Protocol shall be: (a) the landward limit of the coastal zone as defined by each Contracting Party; and (b) the seaward limit of the coastal zone extending to the outer limits of the exclusive economic zone and continental shelf as recognized by international law. Notwithstanding, a Contracting Party may define its seaward limit to an extent that is less than the outer limit of its exclusive economic zone.

The ICZM Protocol provides a framework for promoting regional and national integrated coastal zone management, as well as enhancing cooperation for sustainable development in the Western Indian Ocean region within the geographical coverage. It does so by promoting sustainable use and equitable benefit sharing of coastal and marine resources; and by conserving the ecological integrity and value of coastal and marine ecosystems and their valuable ecosystem services. It provides for monitoring, preparedness, reduction, mitigation and adaptation, and monitoring of the effects of natural risks, especially those associated with climate change; encourages involvement of all stakeholders to participate in planning and implementation; addresses the emerging development activities on the coastal zone; promotes the development and implementation of regional and national integrated coastal zone management frameworks; and prevents, avoids , mitigates and where necessary offsets the harmful effects of anthropogenic activities on the coastal environment.

Marine Spatial Planning (MSP) has been promoted as a globally acknowledged interdisciplinary **tool** amongst other ICZM area-based tools designed to manage the distribution of human activities across marine and coastal areas over time and space. MSP aims to meet ecological, economic, and social goals as well as align different sector policies, thereby serving as a fundamental mechanism for fostering a sustainable blue economy and ensuring the conservation and responsible use of coastal and marine resources.

B. Initiatives Supporting MSP in the Western Indian Ocean Region

The Western Indian Ocean (WIO) countries have increasingly tapped into their marine and coastal resources for economic activities such as fisheries, shipping, energy and tourism. This often results in significant stress on vulnerable marine environments. Marine Spatial Planning (MSP) provides a framework for coordinated management across various sectors, fostering blue economic growth while safeguarding fragile ecosystems and minimizing environmental impacts.

The ten nations party to the Nairobi Convention, which focuses on the protection, management, and development of the WIO's marine and coastal environments, have recognized the critical role of MSP in promoting integrated resource management. This recognition is evident through the following initiatives:

i. Decisions from the Conference of Parties

Several resolutions from the Conferences of Parties (COP) have reinforced the commitment to MSP. For instance, Decision CP.9/10 underscores the importance of MSP in promoting blue economy pathways and calls for the development of capacity-building programs to use MSP as a tool for sustainable economic development. Furthermore, Decision CP.10/8, which focuses on area-based planning tools for a sustainable blue economy, resulted in the Nairobi Convention's MSP strategy for the WIO. This decision encourages the integration of MSP and ecosystem-based approaches into national development planning by the Contracting Parties. Building on this, Decision CP. 11/13 mandates the Secretariat, in collaboration with partners, will develop a regional roadmap for marine spatial planning, guiding national and local plans. Contracting Parties should integrate ecosystem-based planning into national strategies, conduct assessments, and use tools like WIO-Symphony for evidence-based decision-making.

Additionally, there is a growing interest among the COP in the conservation and sustainable use of marine biological diversity in areas beyond national jurisdiction (BBNJ). This interest aligns with the broader goals of MSP and reflects the commitment to comprehensive ocean governance that transcends national boundaries and promotes the sustainable management of marine resources on a global scale.

ii. WIO Region Marine Spatial Planning Strategy and Technical Working Group

The Nairobi Convention countries with support of partners have developed a WIO Region Marine Spatial Planning Strategy to support the region to address transboundary and cross-sectoral marine management challenges through MSP. The process was led by the Marine Spatial Planning Technical Working Group (MSP-TWG). Countries in the WIO region have developed and adopted MSP approaches for different purposes and are currently at different stages of implementation. An update on the readiness of countries to mainstream MSP into their national processes will be shared by the MSP technical working group. Participants' capacities on MSP will be provided during the workshop drawing from the regional strategy and MSP demonstration activities from the countries.

iii. WIO Symphony: A Key Tool for Environmental Impact Assessment in the Western Indian Ocean

The WIO Symphony is an essential tool for conducting environmental assessments to support ecosystem-based Marine Spatial Planning (MSP) in the Western Indian Ocean (WIO). It features over 80 maps, each with a 1x1 km resolution, depicting region-specific

ecosystem components and the pressures exerted by human activities. These maps are created using publicly available data sources.

A unique aspect of the WIO Symphony is its integration with a WIO-specific sensitivity matrix, which highlights the vulnerability of various ecosystems to different pressures across the region. This tool is crucial for analyzing cumulative impacts and predicting environmental outcomes under various planning and management scenarios.

C. Integration of MSP Data, Information Management, and Ocean Governance

Effective Marine Spatial Planning (MSP) relies on comprehensive data and information management to guide planners and decision-makers. Incorporating detailed data from diverse sources requires substantial computational resources to ensure environmental considerations are integrated into the planning process. The interdisciplinary nature of MSP presents challenges in harmonizing and integrating data from various sectors.

In the context of ongoing MSP efforts in Kenya, Tanzania, Mozambique, Mauritius, Madagascar and Comoros, the WIO Region Information Management Strategy (IMS) is crucial. The IMS supports Decision 10.5/3, which emphasizes strengthening national data centers through capacity development in information and knowledge management for informed ocean governance.

To ensure the effective use of the IMS and enhance MSP efforts, capacity-building through the SwAM Ocean Program, WIO Symphony, and the International Training Programme on Marine Spatial Planning (ITP), supported by the Swedish Agency for Marine and Water Management, will be conducted. These initiatives will align with MSP principles, focusing on environmentally sustainable, economically favourable, and socially balanced marine spatial planning, grounded in good governance.

D. Objectives of the workshop and activities

This workshop aims to strengthen Marine Spatial Planning (MSP) across the Western Indian Ocean (WIO) region, specifically focusing on Tanzania, Kenya, Mozambique, Mauritius, Madagascar and Comoros. The goal is to integrate national-level data and the Symphony planning tool into the management of marine resources and human activities, emphasizing conflict resolution, sustainability, and conservation for the blue economy.

Workshop activities

i. Advanced Analysis Training:

Equip participants with skills in spatial modelling, geospatial analysis, and statistical methods for in-depth data analysis. This training will focus on preparing, creating and updating data layers with the potential of integrating local or national datasets identified by participants with compiled data sources. The training will aim to create nationally relevant MSP data and update regional data in the WIO Symphony tool for later assessment of MSP options.

ii. Capacity Building for Sustainable Marine Data Management:

Strengthen national expert capacities in GIS, IT, environmental science, and ecosystem-based fisheries management to promote sustainable marine practices. Gather and generate essential data products to support MSP initiatives. Securely store and describe data to ensure easy access and management. Train participants to regularly update the WIO Symphony data to maintain current and accurate information.

iii. Conflict Identification and Resolution:

Explore the WIOSymphony tool's potential and limitations for use in conflict analysis and zoning. Identify and address conflicts involving fisheries and environment, and/or other coastal activities in case studies. Sessions may be divided into parallel tracks to allow focused discussions on technical analysis or policy implications as needed. Sessions will incorporate both technical and policy-oriented discussions, with opportunities for participants to engage based on their expertise.

iv. Enhanced Understanding and Use of Symphony Tools:

Train participants on utilizing the Symphony tool for MSP assessments, with a focus on sustainable management within the blue economy. Develop initial MSP planning options based on gathered data (and stakeholder inputs) and evaluate the drafted MSP plans using the WIO Symphony tool to ensure they meet sustainability and governance criteria.

v. Conservation and Protection Strategies:

Using available data , develop marine maps suitable to conserve 30% of marine areas by 2030, emphasizing biodiversity preservation and sustainable use of marine resources. Revise and refine MSP plans based on assessment outcomes to optimize environmental, economic, and social benefits. Sessions will incorporate both technical and policy-oriented discussions, with opportunities for participants to engage based on their expertise.

E. Expected Outcomes:

i. **Appreciation and understanding of MSP**:
- Participants will appreciate MSP as a tool for addressing the challenges and opportunities in the protection and management of the WIO coastal and marine ecosystems.
- Participants will gain a better understanding of the process of developing Marine Spatial Plans, including the data and stakeholders required.

ii. **Enhanced Expertise and Capabilities**:
- Participants will enhance their expertise and capabilities for effective MSP implementation.
- Enhanced technical skills in GIS, R, and IT for creating data to support MSP.

iii. **Knowledge Sharing and Best Practices**:
- Best practices and lessons learned on Marine Spatial Planning shared in the region.

iv. **Empowered National Data Centers**:
- Empowered National Data Centers with the knowledge and skills necessary to regularly update and seamlessly integrate relevant data into the WIO Symphony tool to support their country's marine spatial planning efforts effectively.
- Development of national data products and layers to aid national MSP efforts.

v. **Implementation of WIO Symphony Tool**:
- Comprehensive understanding among participants of implementing the WIO Symphony tool to support national MSP.

vi. **Capacity Building for Sustainable Management**:
- Improved capacity for sustainable marine resource management and conflict resolution.

F. Participant Skills recommendation

i. GIS/Modeling Experts

Some of the participants invited to the workshop should have experience working with GIS applications and/or R programming in marine or geospatial data analysis within environmental contexts.

ii. IT Expert

Other participant should have experience in database management, network security, and software troubleshooting. They should be capable of managing and maintaining IT infrastructure that supports GIS and environmental data applications.

iii. Fishery/Environmental or MSP Expert (2 Participants)

Some of the participant should have years of experience in marine conservation, environmental impact assessments, or MSP. A person should possess knowledge of marine ecosystems, biodiversity, and conservation strategies, along with experience in MSP planning/assessment and conflict identification within an MSP context.

G. Data requirement

Part of the workshop will focus on creating data that are relevant for national marine planning and therefore it would be beneficial to the training if participants who represent the **fisheries** and **environment** sectors work together with their GIS counterparts to identify and bring relevant datasets to the workshop for analysis. It is highly recommended that you bring any data on a USB stick or hard drive, in case of internet problems. Examples of relevant data are point data from field surveys, polygons, or GeoTIFF rasters. Important data to bring along are those related to ecosystems and human activities, e.g. species inventories, fishing sites and catches, habitat maps, etc. Participants will receive more instructions on data preparation before the event.

F. Workshop Provisional Programme

Day 1: WIO Symphony Tool Training

- Overview of the WIO Symphony Tool and its purpose.
- Description of how WIO Symphony has been used in the Swedish MSP process.
- Hands-on demonstration and practical exercises.
- Discussion of how WIO Symphony can be integrated into MSP in WIO region. Q&A.

Day 2: Maintaining, updating, and using WIO Symphony

- Overview of the key components of WIO Symphony (backend, data analysis, web tool).
- Practical exercises in breakout rooms: (1) Backend maintenance and development, (2) Data analysis, modeling, mapping, (3) Using the tool for impact assessment.
- Discussion of challenges, responsibility, and ways forward.

Day 3: ArcGIS Online Training – developing spatial maps and online atlases

- Introduction to ArcGIS Online and its features.
- Field data collection tools
- Data integration and visualization using ArcGIS Online.

- Sharing and collaboration

Day 4: Marine Spatial Planning

- Developing marine spatial plans using the tools and methods introduced.
- Collaborative group exercises and plan presentations.

Day 5: Marine Spatial Planning.

- Collaborative group plan presentations.
- Open discussion and suggestions for improvement.
- Survey Session on WIO Symphony Tool, ArcGIS online, and MSP