

# Towards Sustainable Port Development in Western Indian Ocean Region



## In-Person Stakeholder Meeting

Date: 16<sup>th</sup> to 17<sup>th</sup> August 2022

Venue: Dar es Salaam

### CONCEPT NOTE

#### 1. Background information

The WIO Region is experiencing an unprecedented pace of development in various economic sectors. This brings with it demand for large infrastructural developments driven by huge financial inflows from different funding streams. Most of these developments are concentrated in coastal zones with rich natural resources. While the region has an opportunity to define sustainable trajectories for these investments, they have the potential, if poorly planned and implemented, to significantly impact on the integrity of critical habitats and the resource base that future developments and coastal livelihoods depend on. In the WIO Region coastal communities are strongly reliant on coastal resources for their lives and livelihoods. The *Agenda 2063* masterplan for Africa focuses on frameworks that will drive African nations towards becoming global power houses through sustainable and inclusive development. Further, the 2050 Africa's Integrated Maritime (AIM) Strategy provides a broad framework for the protection and sustainable exploitation of the African Maritime Domain (AMD) for wealth creation. The WIO region has a gross marine product of US \$20.8 billion dollars (WWF, 2017); this showcases the economic value of its delicate ecosystems and highlights the need to focus on sustainable development within marine environments. Through utilising tools such as marine spatial planning (MSP), strategic environmental assessments (SEA) and ecosystem-based management (EBM), port developments can continue to meet both economic and environmental goals in collaboration with national, regional and international stakeholders.

The goal of the WIOSAP project is to improve and maintain the environmental health of the region's coastal and marine ecosystems through improved management of land-based stresses. This highlights the need to protect the environmental assets of the WIO coastal regions to provide essential goods and services and is part of the region's commitment to the Nairobi Convention and UN's 2030 Sustainable Development Goals. Component A in particular focuses on the protection, restoration and management of critical coastal habitats and ecosystems.

Through 'Decision CP.8/10.4' and 'Decision CP.9/10', the Nairobi Convention Contracting Parties resolved to adopt Marine Spatial Planning, and Blue and Ocean Economy to promote sustainability. During the 10<sup>th</sup> Nairobi Convention's Conference of Parties meeting held in November 2021, 'Decision CP.10/8' (Area-based Planning Tools for Sustainable Blue Economy) and 'Decision CP.10/9' (Monitoring of the marine and coastal ecosystems) were endorsed, signifying the Convention's commitment to ensure the sustainability of both the ocean economy and the ecosystems services derived from the marine and coastal resources. Specifically, the Contracting Parties requested the Secretariat in collaboration with other partners, to undertake a baseline study and scenario analysis, and develop a toolkit for green port development and expansion in the Western Indian Ocean region through 'Decision CP.9/13' (Enhancing cooperation, collaboration, and support with partners). This decision was further emphasized in 'Decision CP.10/12: Projects and Partnerships' that urge contracting parties to establish partnerships and programmes on ocean action taking advantage of the opportunities offered by climate change financial mechanisms and arrangements.

Therefore, the Nairobi Convention Secretariat, through WIOSAP project, has commissioned the Council for Scientific and Industrial Research (CSIR, South Africa) and the Maritime Technology Cooperation Centre (MTCC) to undertake a project, in consultation with regional port partners and other stakeholders, aimed at advancing sustainable port development in the region. MTCC is responsible for stakeholder convening and coordination, while CSIR is responsible for the technical aspects of the project as presented and approved during the recent 6<sup>th</sup> WIOSAP PSC Meeting held at Nost Be, Madagascar. Other core partners include WIOMSA, Macquarie University and PMAESA. *The project's objectives are to map existing and planned ports in the WIO region, develop and compare sustainable development scenarios in port operations and develop a tool kit for green ports development.* The outputs generated from this work will enable national governments to support and guide the development of new policy options for sustainable port development in the WIO region. Key deliverables of this project are explained below.

## 2. Situation Assessment

The purpose of the situation assessment is to contextualise the status of port development and operations in the WIO region in terms of current, and potential future, effects on the coastal marine environment. This assessment will be prepared in consultation with key stakeholders especially from port management authorities, Focal Points of the Convention, Regional Task Force members and RECs. Planned outputs include:

- Demarcation of ports in WIO region, including operational, those under construction, as well as proposed/planned ports
- Legal and institutional frameworks concerning ports across the WIO countries.
- Identification of key generic environmental impacts associated with port construction and operations, as well as impacts on associated socio-economic benefits (e.g., ecosystem services)
- Geo-spatial demarcation of important coastal marine ecosystems, overlain with port areas in the WIO region (focussing on main commercial ports - operational, under construction, and proposed/planned) to contextualise key environmental impacts relevant to ports in the region.

## 3. Scenario Analysis

There is a wide array of ports across the ten countries. These range from small fishing ports to large commercial ports. They are subject to a diversity of development and operational practices, depending on specific countries' legislation and policies. A detailed, quantitative scenario analysis approach, representative of specific ports in the region, will be extremely difficult. Information and numerical data on present and future port planning and operations, required to inform quantitative scenario

analyses, are not readily available in the region. Consequently, a qualitative scenario analysis approach will be adopted for this study, using easily understandable narratives to describe a range of generic future scenarios for port development in the WIO region, including ‘business-as-usual’ and a selection of sustainable green port development options. Further, it is proposed that scenarios be expressed as anticipatory scenarios, describing specific visions of the future (e.g., anticipate outcomes of a worst case, best case, and business as usual scenario by 2030) rather than an exploratory approach requiring an evaluation of outcome trends into the future (e.g., outcome trends of a worst case, best case, and business as usual scenario anticipated up to 2030).

Drawing on international learning considered relevant to port environments, preliminary driving forces for inclusion in the WIO port scenario analysis, as well as key motivations for their inclusion include (to be confirmed and revised with stakeholders):

DRIVING FORCE		MOTIVATION
Corporate culture and supporting policies	<ul style="list-style-type: none"> <li>Economic models</li> <li>Level &amp; effectiveness of environmental policies</li> <li>Level &amp; effectiveness of social welfare-improving policies</li> </ul>	<ul style="list-style-type: none"> <li>Economic development direction chosen by a port might influence their ability to balance environmental and social sustainability</li> <li>Extent to which ports incorporate environmental and social accountability in official policies should better empower port officials to enforce sustainable practices</li> </ul>
Institutional arrangements	<ul style="list-style-type: none"> <li>Level &amp; effectiveness of internal port arrangements</li> <li>Level &amp; effectiveness port-community-city arrangements</li> </ul>	<ul style="list-style-type: none"> <li>Establishment of dedicated and empowered institutions (e.g., dedicated environment departments in ports) provide platforms to coordinate activities and enforce policies</li> <li>Level to which ports communicate and consider wellbeing of local communities/city (e.g., in and around ports) will determine social sustainability, as well as level of potential conflict to be dealt with</li> </ul>
Technological development	<ul style="list-style-type: none"> <li>Fuel options</li> <li>Energy sources</li> <li>Level &amp; effectiveness of technology development</li> </ul>	<ul style="list-style-type: none"> <li>Fuel and energy sources will determine efforts towards climate change mitigation</li> <li>Degree of technology development is likely to influence a port's ability to address and mitigate impacts such as air, water and soil pollution, and destruction of coastal habitats and biota</li> </ul>
Operational efficiency	<ul style="list-style-type: none"> <li>Level of capacity and skills</li> <li>Level of funding</li> <li>Level of enforcement mechanisms</li> </ul>	<ul style="list-style-type: none"> <li>Skills, capacity, and funding directly correlated to effective implementation of sound environmental/social policies</li> <li>Level of enforcement determines extent to which port authorities can ensure compliance to environmental/social policies</li> </ul>

An array of performance and sustainability indicators has been developed for application in ports. However, for the purpose of this analysis it is proposed that a few key status indicators be selected for evaluation as ultimately reflect the true outcomes of sustainability efforts. While the focus on this scenario analysis is primarily related to environmental matters, selected indicators should also reflect key social and economic outcomes that may be affected by change in environmental outcomes. Drawing on international learning relevant to port environments, preliminary status indicators for inclusion in the WIO port scenario analysis, as well as key motivations for their inclusion include (to be confirmed and revised with stakeholders):

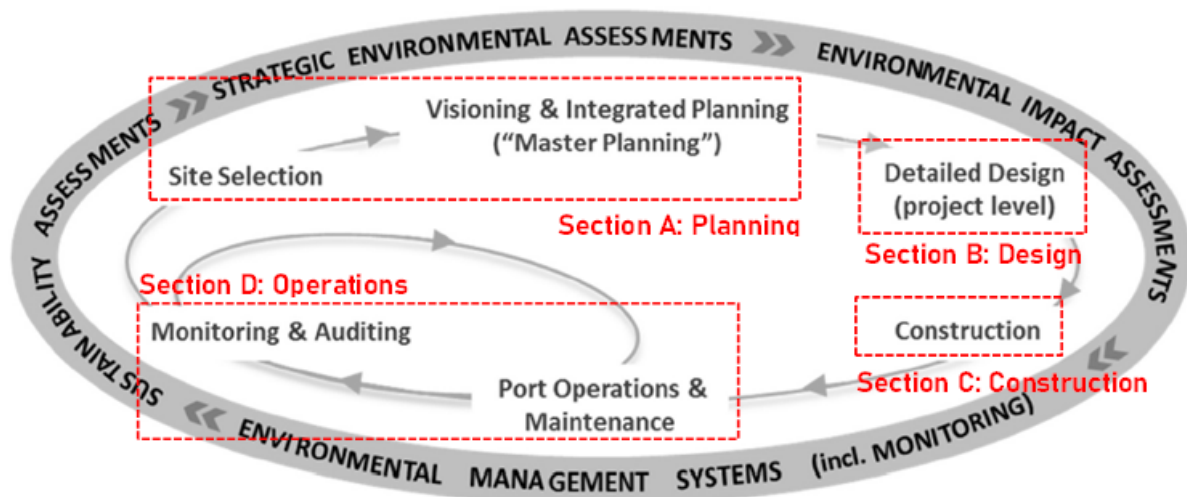
INDICATOR	MOTIVATION
<b>ENVIRONMENT</b>	
GHG emissions	Dedication towards climate change mitigation
Status of air quality	Dedication to manage and control atmospheric emissions
Status of port environmental quality	Dedication to manage and control wastewater, solid waste, and hazardous waste
Status of biodiversity & habitat intactness	Dedication to manage port infrastructure development and operations to protect biodiversity and habitat integrity (e.g., implementing biodiversity trade-off policies)
<b>SOCIAL</b>	
Community Well-being vs Conflict	Dedication towards considering community needs, and their involvement in port matter that may affect their livelihoods
Port-City Collaboration vs Conflict	Dedication to consult and collaborate with adjacent urban centers

INDICATOR	MOTIVATION
ECONOMIC	
Climate resilience	Dedication to withstand increased climate such as increased storminess, SLR etc.
Competitiveness (license-to-operate)	Level to which port environmental and social practices enable competitiveness (linked to international and client pressures re sustainability)

#### 4. Toolkit for Green Port Development

To best contextualise guidance on sustainable port development, it is useful to conceptualise the different sequential stages in the port planning and development cycle that is site selection, master planning, design, construction, operations, and monitoring. The figure below depicts this cycle from the initial site selection through to monitoring and auditing in a cyclical, logical order:

Towards achieving greener ports, various environmental processes are increasingly becoming part of port planning and development processes. Internationally recognized environmental processes, such as strategic environmental assessment (SEA), environmental impact assessment (EIA), and environmental management systems (EMSs), are being implemented in port planning and development. Globally, sustainability assessments also are finding their way into port management, embracing the inclusion of the SDGs of the Agenda 2030. However, for sustainable port development to occur successfully in practice, environmental processes must be integrated into organisational



decision-making processes as part of the traditional port planning and development cycle (see figure above for alignment of key environmental assessment processes with the port development phases).

Specifically, the toolkit will provide practical guidance for countries in the WIO Region on the context of environmental assessments and processes, as well as their sequencing within the engineering port planning, construction, and operational phases. Guidance will include, for example, key requirements to be adhered to and actions to be undertaken during planning, and implementation of various assessment or management tools. It is further proposed that the Toolkit for Green Port be organised in accordance with the key phases of port planning and development, as illustrated in the figure above. This is envisaged to include:

SECTION	TOOLS
A: Planning	A.1 Site selection and Master Planning
	A.2 Planning for Climate Change
	A.3 Guidance on Strategic Environmental Assessment (SEA), including Sustainability Assessment
B: Design	B.1 Guidance on Environmental Impact Assessments (EIA)

SECTION	TOOLS
	B.2 Design for Biodiversity offsets (BOS)
	B.3 Introducing Building-with-Nature Design Options
	B.4 Introducing Ecological Engineering Design Options
C: Construction	C.1 Dredge Management (also relevant in Operations)
	C.2 Environmental Monitoring during Construction
D: Operations	D.1 Examples: Sustainable Port Development Actions
	D.2 Securing External Finance for Port Development Projects
	D.3 Ballast Water Management
	D.4 'Greener' Approaches to Resource Consumption and Improved Environmental Quality
	D.5 Energy Efficiency Management
	D.6 Management of Carbon Footprint
	D.7 Guidance on Environmental Management Systems (EMS)
	D.8 Environmental Monitoring and Evaluation
	D.9 Index for Sustainability Monitoring (linked to SDGs)

## 5. Policy Brief

Finally, a Policy Brief will be prepared, giving future recommendations for green port development in the WIO region. It will be directed at policymakers, proposing specific policy and technical recommendations, motivated and supported by the different deliverables produced as part of this project.

## 6. Meeting overview

In response to a request by the Nairobi Convention, the Secretariat in collaboration with other partners, is undertaking a baseline study and scenario analysis, and develop a toolkit for green port development in the Western Indian Ocean region through 'Decision CP.9/13' (Enhancing cooperation, collaboration, and support with partners') (see Appendix – Concept Note for further details).

This will be the 1<sup>st</sup> in person stakeholder meeting, comprising of port management authorities, Focal Points, WIOSAP Regional Task Force members, RECs and WIO-C members, following a virtual stakeholders meeting held with MTCC representatives on 17 March 2022.

The Objectives of the Meeting are to:

- Discuss and validate the draft situational assessment on ports, specifically:
  - Location of ports (existing, planned and proposed) in WIO countries, and agreement on major commercial ports for consideration in geo-spatial analysis of environmental issues
  - Supporting legislative and institutional frameworks in different countries
  - Scope of port development in region and potential environmental impacts
- Discuss key driving forces and options to engender sustainability in port development (for consideration in scenario analysis)
- Discuss aspects to consider in the development of the toolkit for green port development in the region.

The envisaged Outcomes of this Meeting include:

- Validation of location of ports in region, as well as overview of supporting legislative and institutional frameworks in different countries
- Validation of key commercial ports for consideration in geo-spatial analysis of environmental impacts
- Sensitization on existing, and potential, environmental impacts of port development in the WIO



- Stakeholder engagement in developing options to engender sustainability in port development in the WIO region (for consideration in scenario analysis)
- Agreement on aspects for consideration in development of Toolkit on green port development.