Marine Spatial Planning in SADC

(Mafwila, 2022)

MSP REPORT

SADC MSP REPORT

CONSULTANCY CONTRACT TO DEVELOP THE MARINE SPATIAL PLANNING (MSP), INTEGRATED COASTAL ZONE MANAGEMENT AND MARINE DOMAIN AWARENESS (MDA) STUDIES IN THE SADC REGION

REFERENCE NUMBER: SADC/3/5/2/226

FOR

Southern African Development Community (SADC) Secretariat

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This Report was Revised as Follows:

Due Date	Review	Submitted
November 2022	1st Draft Report	
19 December 2022	Final Report	

Received and Accepted

Consultant	Project Leader (on behalf of the SADC Secretariat)
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Signature and Date	Signature and date

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List of acronyms and abbreviations

ABNJ	Areas Beyond National Jurisdiction
AIS	Automatic Identification System
BGI	Blue Growth Initiative
CBD	Convention on Biological Diversity
CCAMLR	Commission for the Conservation of Antarctic Marine Living Resources
DMPA	Dynamic Marine Protected Area
DRC	Democratic Republic of Congo
EAC	Ecosystem Advisory Committee
EBA	Ecosystem-Based Approach
EBSA	Ecologically or Biologically Significant Area
EC	European Commission
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
EU	European Union
FAO	Food and Agriculture Organization
GDP	Gross Domestic Product
GIS	Geographic Information System
ICZM	Integrated Coastal Zone Management
IUU	Illegal, Unreported and Unregulated Fishing
JMA	Joint Management Area
IOC	Intergovernmental Oceanographic Commission of UNESCO
IMO	International Maritime Organization
LDC	Least Developed Country
LLDC	Landlocked Developing Country
MARPOL	International Convention for the Prevention of Pollution from Ships
MPA	Marine Protected Area
MPS	Marine Policy Statement
MSP	Marine Spatial Planning
NGO	Non-Governmental Organization
NM	Nautical Mile
NOAA	National Oceanic and Atmospheric Administration of the United States of America
PSMA	Port State Measures Agreements

Ramsar	Convention on Wetlands
RFMO	Regional Fisheries Management Organization
SADC	Southern African Development Community
SAMP	Special Area Management Plan
SDG	Sustainable Development Goal
SEA	Strategic Environmental Assessment
SIDS	Small Island Developing States
SMART	Specific, Measurable, Achievable, Realistic and Time-Bound
SMARTIE	Specific, Measurable, Achievable, Relevant, Time-Bound, Inclusive and Equitable
SOLAS	International Convention for the Safety of Life At Sea
SWOT	Strengths, Weaknesses, Opportunities, and Threats
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNEP	United Nations Environment Programme
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change

Executive Summary

The Southern African Development Community (SADC) is a Regional Economic Community comprising 16 Member States, namely, Angola, Botswana, Comoros, Democratic Republic of Congo, Eswatini, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, United Republic of Tanzania, Zambia and Zimbabwe. It was stablished in 1992, and it is committed to Regional Integration and poverty eradication within Southern Africa through economic development and ensuring peace and security. With the development of the SADC Sustainable

Blue Economy Strategy, tools for implementing the strategy are needed. This study was commissioned by the SADC Secretariat to determine the status of MSP in SADC Coastal and Island States. The study was focused in 6 Coastal (DRC, Angola, Namibia, South Africa, Mozambique, and Tanzania) and 4 Island (Comoros, Madagascar, Mauritius, and Seychelles) States within the SADC Region. The study aims to give an overview of MSP in the SADC Coastal and Island States, about its development, approval, and implementation status, and how it can be used as a tool in implementing the Blue Economy. Marine Spatial Planning (MSP) is a process used to manage and allocate space in the ocean to achieve economic, social, and environmental objectives. MSP is a comprehensive and integrated approach to coastal and marine management, which seeks to balance competing uses of the ocean, such as fishing, mining, shipping, military, tourism, energy production, and conservation.

The MSP process involves several steps, including data collection and analysis, stakeholder engagement, mapping and visualization, scenario development, and plan implementation and monitoring. The process is typically led by a government agency, which may collaborate with other stakeholders, including industry, environmental groups, and local communities. Globally, MSP has gained increasing attention in recent years, as the pressure on marine resources and ecosystems has increased, so is the need to have MSP as a management tool.

It is seen as a tool to help manage the complex interactions between different uses of the ocean and to promote sustainable development, which is a cornerstone of the blue economy. It is also seen as a way to help countries meet their international commitments to protect the marine environment and to achieve the UN Sustainable Development Goals. While MSP has been implemented in many countries in SADC region, there is still much to learn about how to effectively plan and manage the marine environment. MSP is a relatively new field, and there are many challenges to implementing the process, including limited data availability, conflicting stakeholder interests, finance and governance issues. Nonetheless, MSP is seen as a critical tool for managing the ocean and ensuring that it remains a vital resource for future generations.

CHAPTER 1: Introduction

1.1 Background to the Study

The Southern African Development Community (SADC) is a Regional Economic Community comprising 16 Member States, namely, Angola, Botswana, Comoros, Democratic Republic of Congo, Eswatini, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, United Republic of Tanzania, Zambia and Zimbabwe. Established in 1992, SADC is committed to Regional Integration and poverty eradication within Southern Africa through economic development and ensuring peace and security.

The vision of and ultimate impact desired by the Southern African Development Community (SADC) is one of a common future, a future in a regional community that will, among other objectives, ensure social-economic wellbeing and improve the standards of living and quality of life, freedom and social justice and peace and security for the peoples of Southern Africa. By 2050, we envision a peaceful, inclusive, middle to high income industrialised region, where all citizens enjoy sustainable economic well-being, justice and freedom. To attain this vision, SADC's expected specific results include the promotion of sustainable and equitable economic growth and socio-economic development that will ensure poverty alleviation with the ultimate objective of its eradication through regional integration.

With a population of 345.2 million people (2018), and growing at a rate of 2.5% per annum, the SADC region is increasingly developing into a huge market for the African region and beyond. The largest share of the population in the SADC lives in the Democratic Republic of Congo (DRC) with 26.6%, followed by South Africa with 16.7%, and the United Republic of Tanzania with15.7%. The Gross Domestic Production (GDP) for the SADC region stood at $721.3 billion in 2018 and growing at 1.8% per annum (SADC Statistical Report of 2018). However, inflation remains high and stood at around 18.6% increase between 2018 and 2019.There are cross country variations in inflation rates, with some SADC Member States recording double-digit rates – Zimbabwe (607.1%), Angola (16.6%), Malawi (11.5%), and Zambia (10.3%) over the 2018-2019 period. The lowest inflation rate was recorded in Mauritius and Seychelles at 1.6%. The importance of agriculture to social and economic growth, poverty reduction, food security, and nutrition remains central to the region's overall developmental agenda.

1.2 Current Situation

Ocean and inland waters (seas, lakes, rivers and reservoirs) provide significant benefits to humanity, and these include: i) food and nutrition security from fisheries and aquaculture, ii) economic and social development from fisheries and aquaculture, marine and coastal tourism, shipping, mining, energy and iii) ecosystem services such as carbon sequestration, water filtration, atmospheric and temperature regulation, protection from erosion and extreme weather events. However, the asset base of oceans and inland waters has been eroding rapidly because of overfishing, pollution from land-based sources, mangrove deforestation, infra-structure development, urbanization, climate change and ocean acidification. Hence, realizing the full potential of the oceans and inland waters requires a paradigm shift to embrace a new, responsible and sustainable

approach that is more environmentally, socially and economically effective. This comes at a crucial time when the need for food, medical drugs and resources from the ocean and inland waters is increasing rapidly to meet the needs of the growing population.

Implementing the Blue Economy requires a "toolbox" with several existing, new and often better strategies (African Union 2012; Commission of the European Communities 2007; UNECA 2016). These include integrated maritime strategies and policies, integrated coastal management, marine protected areas etc. One of the highly rated and promoted tools is known as ecosystem-based marine spatial planning (Douvere & Ehler 2006; Domínguez-Tejo et al. 2016). It has been argued that the Blue Economy makes its strongest gains when leveraging existing institutional relationships to address strategic gaps that affect multiple sectors and players, and which catalyze visible benefits for them in the long term (UNEP 2015). Ecosystem-based management, marine spatial planning (MSP), integrated coastal management (ICM) and the establishment of marine protected areas (MPAs) are established elements in support of the Blue Economy.

1.2 Nature of the Issues in Marine Spatial Planning

Spatial planning for marine areas, from coastal to open-ocean regions, is being developed worldwide to foster sustainable ocean management and governance, eventually sustainable blue economy. MSP is globally widespread and a topic of increasing importance in the scientific and policy realms. It is currently under development in almost 70 countries, encompassing six continents and four ocean basins. Despite its acceptance and use, development and implementation of MSP still faces a myriad of present and future, conceptual and practical challenges, some of them being more striking and widespread. There are major issues or challenges that need to be properly addressed so that MSP can truly contribute to a sustainable blue economy. The following issues need special attention and be addressed: lack of political and institutional frameworks, stakeholder engagement, encompassing human and social dimensions in MSP, balancing economic development and marine ecosystem conservation, and adapting to global environmental change (Santos et.al., 2018).

1.3 The Study Area

The study was conducted in six (6) SADC Coastal and four (4) Island States as shown Figure 1.

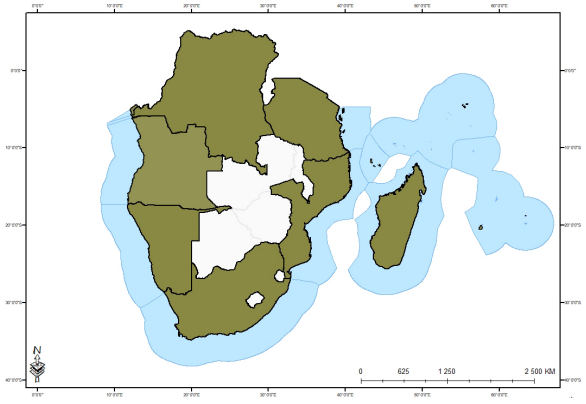

Figure 1: Depicts the study area/ countries in olive shaded colour (Democratic Republic of Congo; Angola, Namibia, South Africa, Mozambique, Tanzania, Madagascar, Mauritius, Comoros, and Seychelles). Source: Map drawn by S.K. Mafwila, 2022.

1.4 Aims and Objectives

1.4.1 Aims

The study aims to give an overview of the Marine Spatial Planning (MSP) in the SADC Coastal and Island States, about its development, approval, and implementation, as well providing a mechanism application of MSP as a tool for sustainable blue economy.

1.4.2 Objectives

The overall objective of the Consultancy is to conduct studies on Marine Spatial Planning in the SADC Region as part of the Blue Economy Toolbox.

1.5 Limitations

The study was conducted over a short period of time, and it is dependent on already existing information (desktop study), thus relies heavily on the willingness of member states to share the required information.

1.6 Assumptions

There is commitment from Member States and other relevant stakeholders to provide necessary information and data, and that there is readily available technical information and data from national, regional and international research institutions, universities, the Blue Economy sector and the media.

1.7 Risks

Delays in appointment of consultants; appointment of a consultant with limited understanding of the Blue Economy sector especially on areas of Marine Spatial Planning, Integrated Coastal Management and Marine Domain Awareness in the SADC region.

1.8 Compilation of the Report on MSP

This study is a desktop study heavily relying on the existing information on Marine Spatial Planning in SADC in 6 Coastal and 4 Island states. Existing knowledge is synthesized in the context of SADC and draws also from international best practices in countries where MSP has been fully implemented. Most the maps used a drawn by the author of the report, if not then the maps are fully referenced. Infographics used are also developed by the author, adopting from existing information on MSP. Therefore, the study is primarily based on secondary data compiled through comprehensive desk research of publicly available materials at national, regional and continental levels. Official reports, books and articles were examined, and national and regional policies, frameworks, strategies and practices analysed. In some cases, consultations through direct communication with officials and experts, telephone conversations and email exchanges have been employed for clarification and verification of information. A short survey questionnaire was developed and applied, and it targeted the SADC Coastal and Island States Focal Point Persons for the Blue Economy, and experts in MSP, ICZM, and MDA. This was done to bridge the information gap on MSP in the SADC region. Some insights, shared forms part of the report.

Chapter 2: Literature Review

2.1 Literature Review and annotation for MSP

2.1.1 Introduction

The African continent through the African Union has developed the Continent's Blue Economy Strategy, which speaks to the African Continent's natural resources endowment, which if managed sustainably could bolster Africa's income generation to support her social and economic development, which in turn supports the efforts to achieve the united Nations' Sustainable Development Goals (SDGs). Therefore, it is imperative for the African Regional Bodies to support these efforts. As such the Southern African Development Community (SADC) has taken up challenge heads-on to develop the SADC Blue Economy Strategy, which should be a cornerstone of this development agenda in support members states. However, in order to achieve the implementation of the blue economy strategy, there are some tools that are needed to facilitate the process and attain the highest rewards from the Blue Economy. One such tools is the Marine Spatial Planning (MSP). Therefore, at all levels (individual countries, regional, continental, and international) there is an increasing demand for decision makers to deliver on a wide range of social, economic, and environmental objectives with respect to marine and coastal space (Gacutan et al., 2022). Successful, ocean governance policies for individual nations informed by international agreements such as the United Nation conventions and Sustainable Development Goals (SDGs) shapes the strategic vision of the ocean (Obura, 2020). In order to achieve the SADC Blue Economy strategy, depends on the ability to inform and implement management actions and evaluate their effectiveness in progress towards the set objectives (Gacutan et al., 2022). Management of ocean activities requires a comprehensive understanding of the multiple pressures posed on ocean ecosystems, in altering their condition, extent, and functioning. Thus, ocean management is characterised by highly contextual challenges, multiple stakeholders, varying spatial scales, and unpredictable feedbacks between components (Schultz et al., 2015). Progress towards sustainable, inclusive and equitable uses of oceans relies on aligning conservation (ocean health) and development (ocean wealth) strategies at these multiple scales and contexts (Ruijs et al., 2019).

2.1.2 Background

Planning for marine areas, from the low water mark to offshore areas, forms part of the much-needed tools for successful implementation of the Blue Economy, and it is being developed worldwide to foster sustainable ocean management and governance (Agardy, 2010; Douvere, 2008; C. N. Ehler, 2021a, 2021b). Over the past 30 years significant progress has been made by governments in their thinking about ocean planning, spurring a whole discipline called marine spatial planning (MSP). Marine Spatial Planning is globally widespread and a topic of increasing importance in the scientific and policy realms. It is has received attention in more than currently 70 countries (i.e., about 45% of all coastal states), encompassing six continents and four ocean basins (Sheppard, 2019; UNESCO/IOC, 2021). Despite its acceptance and use, the development and implementation of MSP still face a myriad of conceptual and practical challenges – from political to institutional, social, economic,

scientific, and environmental (Frazão Santos et al., 2021). Although differences are found across distinct biophysical, socioeconomic and political contexts (Frazão Santos et al., 2021), some challenges are more striking and widespread. Here, we highlight seven major challenges that need to be properly addressed to ensure the long-term suitability and sustainability of MSP (Frazão Santos et al., 2021).

Several countries have produced strategic ocean plans and policies to provide a coherent point of reference across ministries and departments responsible for the blue economy, (e.g., Portugal, South Africa), these are meant to provide guidance and actions towards achieving a vision of a nation's relationship with the ocean (Gacutan et al., 2022). Commonly embedded within such documents are strategies for ocean-based economic development, focusing on the sectors related to ocean space and resources ('ocean economy'), the growth in production of such sectors (e.g., 'Blue Growth' within the European Union, COM/2021/240 final) and the consideration of sustainable development through a 'blue economy' (Fenichel et al., 2020). In response to the policy challenges that arise from such strategies, integrated management approaches such as marine spatial planning (MSP) have been championed to overcome siloed sectoral management.

Marine Spatial Planning is widely used to analyse and allocate human activities within the marine domain, often through a participatory process (Douvere, 2008). The area-based framework is advocated to promote integration in managing inter-sectoral conflicts for space and resources, (Saunders et al., 2019a)and the pressures posed by human activities on the environment (Saunders et al., 2019a)

Many MSP processes are ecosystem-based (Katsanevakis et al., 2011), in striving to better represent the highly interconnected relationships between society and the ocean, in its recognition as a socio-ecological system (Lauerburg et al., 2020). The socio-ecological lens furthers the integration of knowledge by recognizing how social structures and human interactions impact ecosystems, and conversely, how the health and functioning of ecosystems impact social interactions and wellbeing. Employing such an approach account for the potential impacts on a diverse range of ocean stakeholders when defining the future relationships between society and the ocean (Charles, 2012). Thus, ecosystem-based approaches are purported to enhance various dimensions of integration within ocean governance involving, inter alia, meaningful engagement with multiple policies and sectors, stakeholders, spatial (including cross-border considerations) and temporal scales, in addition to the collation of knowledge across multiple knowledge domains (Saunders et al., 2019b). A challenge remains, however, in adequately measuring and accounting for material contributions of the ocean to society and the economy, in addition to socio-cultural aspects of a system, such as non-market (Domínguez-Tejo et al., 2016) and non-material (Saunders et al., 2019c) considerations within MSP implementation.

2.1.3 Marine Spatial Planning (MSP) definition

MSP has more recently emerged as the leading concept for integrated marine planning and ecosystem-based management, which ties in well with the concept of Blue Economy.

MSP is defined by Ehler and Douvere (2006) as: a public process of analysing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic and social objectives that are usually specified through a political process.

While such planning processes can take many different forms, the Intergovernmental Oceanographic Commission of UNESCO (IOCUNESCO) has developed a 10-step model (Figure 3) for the design and implementation of MSP processes (Ehler and Douvere, 2009), as well as a guide to evaluating MSP processes (C. Ehler & UNESCO, 2015). The IOC-UNESCO guides are widely regarded as a blueprint for good practice MSP and are frequently used to develop, analyse and evaluate MSP efforts. Whether or not MSP is able to accomplish the desired outcomes will necessarily be a product of many interrelated factors. Implementation can be hampered by lack of political will, disparity between scales of governance, mismatches between science and policy cycles, fragmentation between MSP and other marine governance systems, failure to define clear goals and metrics, lack of adaptive mechanisms, and inadequate stakeholder engagement and buy-in (Ehler and Douvere, 2009; Flannery et al., 2016; Jones et al., 2016; Pomeroy & Douvere, 2008).

2.1.4 Most common technical Issues

Effective MSP would require a range of data including:

- timeseries of environmental data;
- maps of geomorphology;
- the location of vulnerable and other important marine ecosystems;
- the extent of the spatial footprint of human activities in each area (Wright et al., 2021).

This is a considerable challenge at regional scale (like SADC) as the dynamism and scales of the immense open ocean and economic exclusive zone (EEZ) means that longer-term observations are required to differentiate pattern from noise. Very often, marine ecosystems are increasingly influenced by a changing climate. Several Coastal States have produced high resolution maps of the seafloor in their EEZ, most of the ocean floor has not been mapped in any detail (Rogers et al., 2015). According to Rogers and others (2015) and (Webb et al., 2010), the lack of baseline data, which increases with distance and depth, is largely due to the high costs involved in sampling deep and distant areas. A lack of data integration and standardization across the countries and organisations involved in sampling in EEZ ecosystems hinders the development of coordinated, holistic, long-term time series (Wright et al., 2021). Although, (Wright et al., 2021) deals with areas beyond national jurisdiction there is a lot of shared technical issues within the EEZs of Coastal states and Island states. Monitoring technologies, both remote and in-situ, are rapidly evolving and reducing in cost (e.g. Autonomous Underwater Vehicles could allow us to cost effectively survey ecosystems over much larger areas) (Huvenne et al., 2018), and the use of drones are also increasing especially for nearshore areas, while ongoing efforts to develop standards for monitoring should improve data integration issues.

2.1.5 Legal and policy frameworks

The existing framework for the management of EEZ is fragmented, uneven and uncoordinated, resulting in a management regime that is less than the sum of its parts (Ban, Bax, et al., 2014; Gjerde et al., 2016) (Ban, Maxwell, et al., 2014), however, Large Marine Ecosystems (LMEs) level, more development towards a collective ecosystem-based management exists in Benguela Current Large Marine Ecosystem (BCLME) and the Agulhas-Somali Large Marine Ecosystem (ASCLME) as well as work done by Western Indian Ocean Marine Science Association (WIOMSA). The precise mandates of the plethora of existing organisations are

often unclear, and there is little cooperation or coherence between them. There is no agreed set of comprehensive overarching governance principles applicable to areas beyond national jurisdiction (Houghton, 2014), nor shared principles for integrated, ecosystem-based and precautionary management (Ban, Bax, et al., 2014).

Establishing "appropriate authority" to both plan and implement MSP is critical (Ehler and Douvere, 2009), but there is currently no such authority at a regional level (i.e. SADC), but rather at individual coastal and island states. The mandates of existing bodies are currently insufficient for effective MSP, while geographical gaps (Ban, Bax, et al., 2014) in the absence of an appropriate authority or a broader culture of cross-sectoral cooperation and management, actors face considerable challenges in coordinating action (Ban, Maxwell, et al., 2014; Freestone et al., 2014). While some progress has been made at the regional level, these initiatives cannot provide cohesive management without coordination, both among themselves and with the various international organisations that have a role including ABNJ (e.g. ISA, IMO) (Ban, Bax, et al., 2014; Wright & Rochette, 2017). More generally, the comprehensive and integrated nature of MSP will likely entail a level of communication, collaboration and flexibility that goes well beyond the current status quo. In contrast to the fragmented system currently in place, successful MSP requires effective interplay between competent organisations, i.e. non-hierarchical organisations operating in sync based on a common purpose and set of principles (Kidd & Ellis, 2012).

2.2 Situation Analysis of MSP in SADC

The situation analysis of the SADC Coastal and Island States is shown in Table 1. To date, out of the 10 countries, two Island states (Seychelles and Mauritius) and two Coastal States (South Africa and Tanzania) have fully developed their MSP and implemented their plans, and fully operational. Two Coastal States (Angola and Namibia) have made strides in the development of the marine spatial plans through the MARISMA project, and their plans are at the level of National approvals, before they can be implemented. Other five countries (Comoros, DRC, Madagascar, Mozambique, and Tanzania) are yet to develop their marine spatial plans.

Country	Type	MSP	MPAs	LMMAs
Angola	Coastal	Underway	Yes	Yes
Comoros	Island	Underway	Yes	Yes
DRC	Coastal	Underway	Yes	Yes
Madagascar	Island	Yes	Yes	Yes
Mauritius	Island	Yes	Yes	Yes
Mozambique	Coastal	Underway	Yes	Yes
Namibia	Coastal	Underway	Yes	Yes
Seychelles	Island	Yes	Yes	Yes
South Africa	Coastal	Yes	Yes	Yes
Tanzania	Coastal	Yes	Yes	Yes

Table 1. Showing the status of Marine Spatial Planning (MSP) and related activities in SADC Coastal and Island States. MSP: Marine Spatial Planning; MPA: Marine Protected Areas; LMMA: Locally Managed Marine Areas. Yes = MSP is fully developed and implemented; Underway = MSP is under development, drafted, neither endorsed by National Government nor implemented; X = no information available/ have not started the process.

MSP has been quite promising in several African countries which made significant progress on MSP during the past few years. MSP has been prioritised on the continent, mostly lead by Governments, assisted, in several cases, by international initiatives and/or funds. For instance, MSP for the respective Exclusive Economic Zone (EEZ) and Territorial Sea has started in 2016 with the financial and technical assistance of GIZ5 at Angola and Namibia (which also formed an interagency MSP task force in late 2016). South Africa made by far significant progress since it accomplished a draft MSP legislation and framework in 2016. A draft MSP bill was approved by the Cabinet in February 2017 and planning in four regions covering the entire EEZ was completed in 2021.

In Madagascar, MSP discussions began at national level and a new Ministry of the Seas was established in order to deal with issues regarding both its EEZ and Territorial Sea. Mauritius announced in December 2016 the development of a marine spatial plan for its EEZ and already presented significant progress at the UNESCO/DGMARE MSP 2nd international conference (Paris, 15-17 of March 2017). Seychelles run an MSP process focused on planning for and management of the sustainable and long-term use and health of the Seychelles EEZ.

This MSP Initiative is a government-led process, having planning and facilitation managed by The Nature Conservancy (TNC) and TNC Canada in partnership with the government of Seychelles. Funding for the initiative were provided through a number of grants to the Government of Seychelles and an Oceans 5 grant awarded to TNC.

CHAPTER 3: A Conceptual Framework for Marine Spatial Planning

3.1 Introduction

Seas and oceans play an essential role for life on earth, sustainable development, employment and innovation. However, there are increasing pressures facing them: biodiversity loss and degradation of marine ecosystems, climate change, acidification, eutrophication, pollution, over-exploitation including over-fishing, illegal activities linked with piracy, human trafficking. Many countries have undertaken the initiative to move towards a more integrated and ecosystem-based management of the marine environment, in the pursuit of sustainable development of the seas and the ocean. Therefore, Maritime Spatial Planning (MSP) is developing and growing rapidly and constantly worldwide. MSP is a key tool or instrument to balance sectoral interests and achieve the sustainable use of marine resources with the ecosystem-based approach as the underpinning principle (EC, 2010). However, there are different levels of implementation of marine spatial planning (MSP) processes in the world, including areas where MSP is in its infancy and where joint learning, improved governance or capacity building is needed, or areas where arrangements for MSP may exist but a strategic approach to facilitate coordination would be necessary. This chapter delves in the Conceptual Framework for Marine Spatial Planning.

3.2 Marine Spatial Planning (MSP) in brief.

There exist several definitions of Marine Spatial Planning (MSP) as reviewed in literature review section of this report. Here we are going to adopt this definition: It is defined as a "public process of analyzing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic and social objectives that have been specified through a political process" (UNESCO, 2015).

MSP Characteristics:

- Integrated and multi-objective, including all important economic sectors; economic and social objectives as well as ecological ones
- Strategic and future-oriented, considering alternative means to achieve a vision
- Continuing and adaptive, with an emphasis on performance monitoring and evaluation--and learning by doing
- Participatory, building a broad base of stakeholders to ensure long-term support for management
- Ecosystem-based, with a focus on maintaining ecosystem services over time
- Place-based, with a focus on marine spaces that people can understand, relate to, and care for.

3.3 Evolution of MSP: From Concept to Practice.

The MSP was initially proposed in 1976 by international and national interests in developing marine protected areas (MPAs) as a response to the environmental degradation

of marine areas caused by anthropogenic activities (Olsson et al. 2008). As early as 1980s, zoning plans were created for the Great Barrier Reef in Australia (Day 2002), although in Europe at least this did not lead to a more comprehensive debate concerning the essence of MSP. The Great Barrier Reef zoning plans also had a primary goal of marine conservation - a very different character and scope to the multiple-objective marine spatial plans currently being created in Africa, Asia, Europe and the USA, and elsewhere.

In Europe discussion surrounding the possibility of spatial planning in the sea began in earnest around 2000, with the first mention of the term MSP in 2001 (VASAB, 2001). A veritable explosion of publications occurred in the years 2007–2009, mostly composed of policy documents and handbooks indicative of a more practical engagement with MSP (EC 2007a, b, 2008b; Ehler and Douvere 2007; Acker and Hodgson 2008; Ekebom et al. 2008; Schultz-Zehden et al. 2008; Zaucha 2008; Ehler and Douvere 2009). The first novel work dealing with the concept and practical implementation of MSP also appeared at this time (Douvere and Ehler, 2008). At this point, the first maritime spatial plan in the EU had been elaborated, namely by the German federal state of Mecklenburg-Vorpommern for its territorial sea, which was approved in 2005 (Heinrichs et al. 2005).

The EU integrated maritime policy, as outlined in the Green Book (EC 2006) and Blue Book (EC 2007a) was the real breakthrough, and presented, in detail, in the EU Action Plan (EC 2007b). Then the subsequent publication of the "Roadmap for Maritime Spatial Planning: Achieving Common Principles in the EU" (EC 2008b), which describes MSP as "providing a framework for arbitrating between competing human activities and managing their impact on the marine environment" (Figure 2). Its objective is described as "balancing sectoral interests and achieve sustainable use of marine resources in line with the EU Sustainable Development Strategy". It also stresses that MSP is a process involving data collection, stakeholder consultation and participatory development of a plan, including a process of monitoring and review (Figure 3). A step-by-step guide to the development and general implementation of MSP was crafted by UNESCO (2015) (see figure 3). Thus, there are existing guidelines, to which SADC region could adopt in the implementation of the sustainable blue economy.

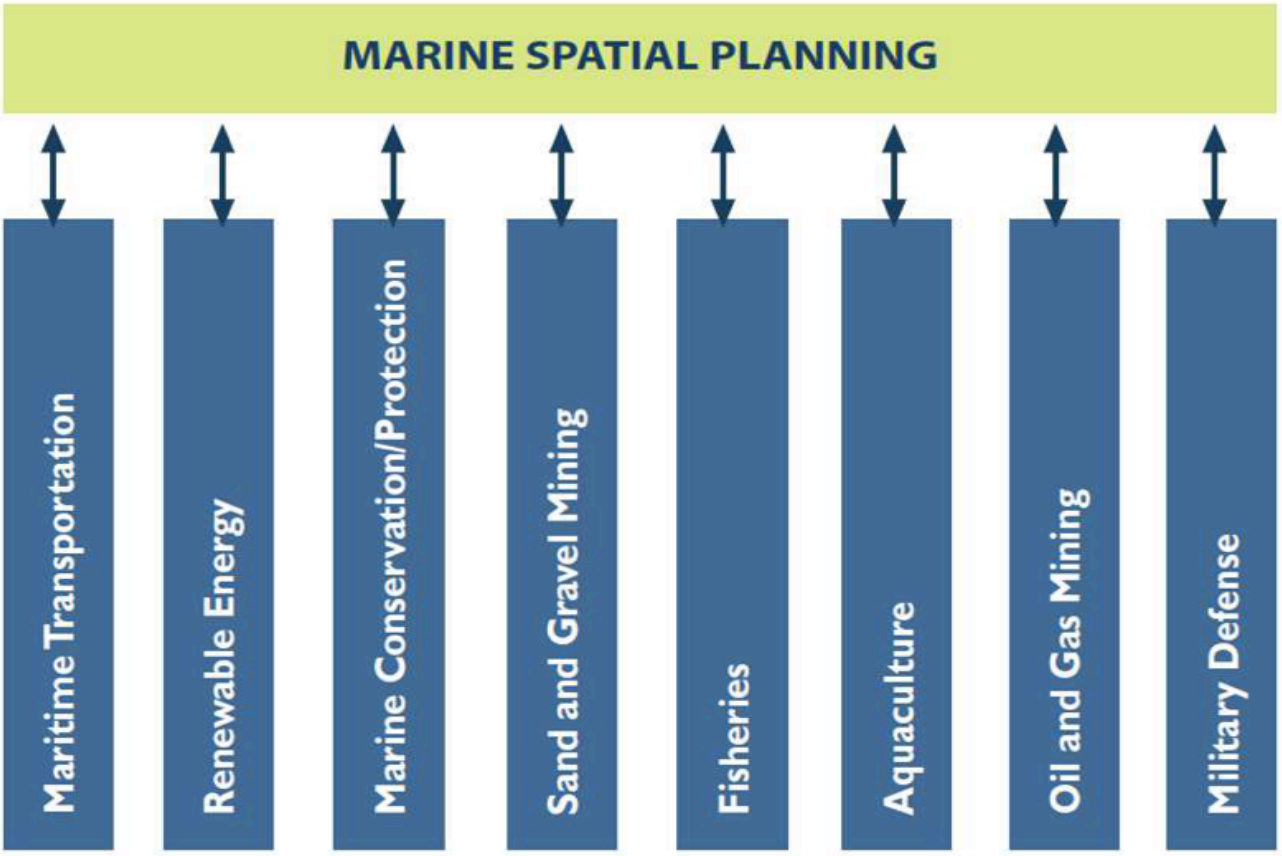

Figure 2: Marine Spatial Planning Integration for Multisectoral consensus (IOC-UNESCO, 2015).

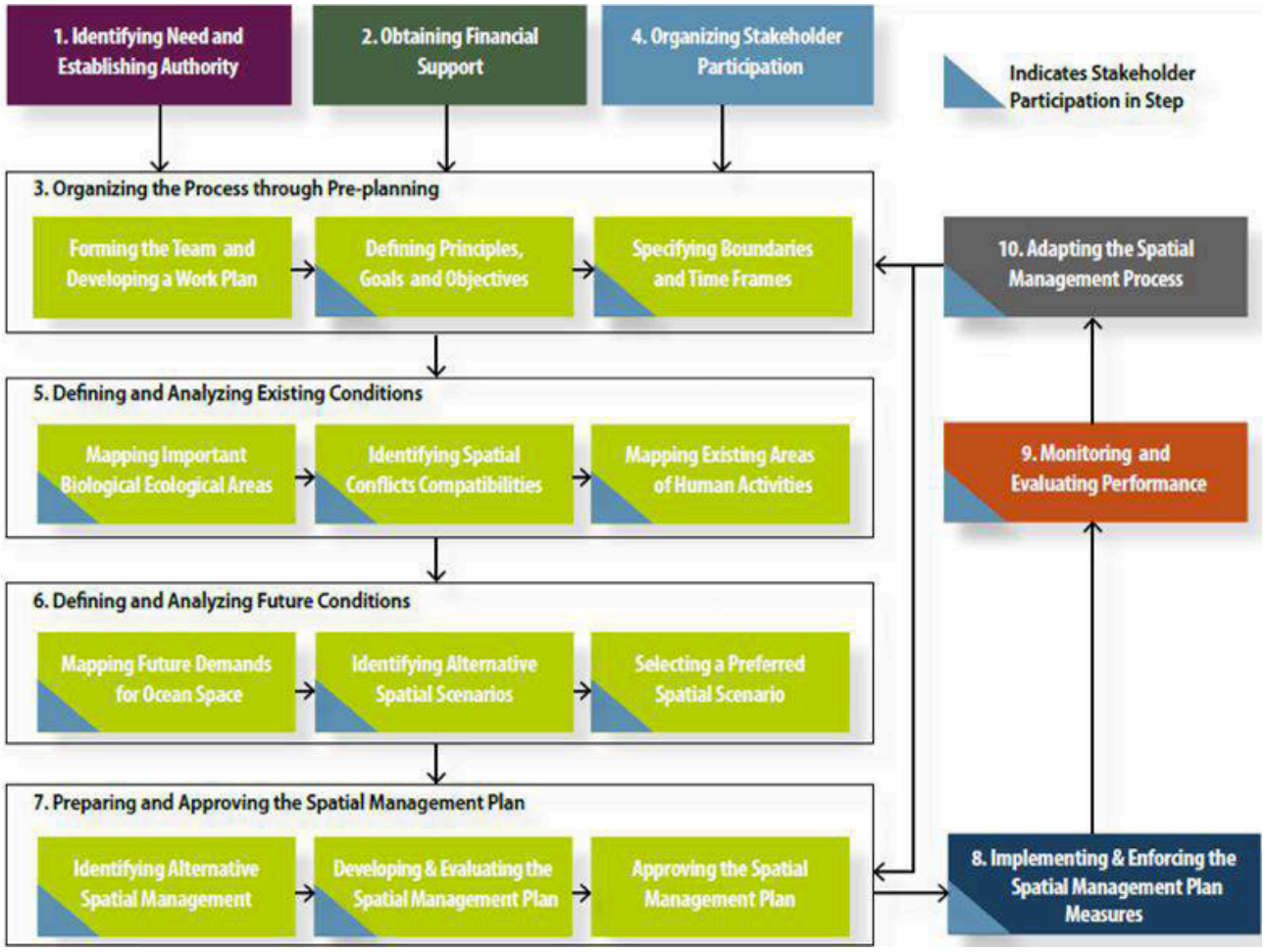

Figure 3: Step by step Guide towards implementation of Marine Spatial Plan (MSP) (Source: Ehler and Douvere, 2009; UNESCO 2015).

3.6 General Objectives and Goals of Marine Spatial Planning

In most countries, MSP was developed to establish Marine Protected Areas, however, with new interests in Blue Economy, this has taken added objectives and goals, as it does accommodate, the planning and management of multiple use of the ocean space, by delimiting and allocating the space to various users. Ecosystem-based Management of the ocean space, as well the blue economy is prime to the introduction of MSP as a tool for sustainable implementation of the Blue Economy.

3.7 International Framing Agreements that dictate for Marine Spatial Planning.

In addition to binding and non-binding legal frameworks, such as the UNCLOS, a range of framing conventions and agreements have been ratified since 2010 that must dictate long-term ambitions and contexts for MSP outcomes (Figure 2). As society attempts to move towards a more sustainable and equitable future, the recognition that poverty alleviation in conjunction with strategies that build economic growth and address social needs, while at the same time tackling climate change and

environmental protection, is becoming more widely accepted.

While both the individual frameworks and the inevitable interconnectedness of such efforts set the scene for MSP in terms of critical areas of contribution, they also highlight a gap, both theoretical and practical, in defining how to address the multi-scale nature of national and global scale of resource governance (Jay et al., 2016; Mahon et al., 2010). While interactions exist between different policy drivers at multiple scales, the overall landscape has been characterized by tensions or weak links between drivers and/or national priorities such as the

environment, marine renewable energy, or fisheries (Qiu and Jones, 2013; Kidd and Shaw, 2014). This demonstrates the need to understand both the international context as well as the institutional settings that regulate these sectors regionally and nationally in order to produce effective marine spatial plans.

3.8 Global Perspective of Marine Spatial Planning Efforts

It has been a decade and half of years to date, and Marine Spatial Planning (MSP) has gained considerable importance all around the world. Various coastal and Island states have started to use MSP to achieve a sustainable use of their marine space, including the goal of developing a "Blue Economy", and biodiversity conservation in ocean and coastal areas. To date, 100 countries now have MSP initiatives, ranging from early stages (new authority and funding arrangements) to plan revisions and adaptation (MSPGlobal, 2022).

Although, the MSP concept – and one of its primary tools, ocean zoning – was stimulated by international and national government and non-governmental interests in developing marine protected areas. The more recent attention has been placed on planning and managing multiple uses of marine space, particularly in areas where multiple use conflicts are already well known and specified. In different places, MSP concepts are being used as a first step to make ecosystem-based management a reality (MSPGlobal, 2022).

Marine Spatial Planning is widely used to analyse and allocate human activities within the marine domain, often through a participatory process (Douvere, 2008). The area-based framework is advocated to promote integration in managing inter-sectoral conflicts for space and resources, (Saunders et al., 2019a)and the pressures posed by human activities on the environment (Saunders et al., 2019a).

As mentioned earlier, MSP has a strong association with marine nature conservation and has been interpreted as an extension of the logic of creating marine protected areas (MPAs). In the 1980s, Australia implemented the zoning system to facilitate the sustainable management of the Great Barrier Reef Marine Park (GBRMP) which serves as common referenced for a pioneering Case study of MSP (Day, 2002). Further initiatives in North America, such as the National Marine Sanctuaries Program, were also strongly led by environmental concerns and represented initial movement toward an ecosystem-based management (EBM) approach for marine areas (Flannery and Cinnéide, 2012). These successful examples encouraged the adoption of an ecosystem approach to MSP thinking, whereby management interventions are sensitive to ecological constraints (Kelly et al., 2018) leading the early MSP literature to closely align with the Ecosystem-base Management (EBM) (Crowder and Norse, 2008). However, the uptake of MSP over the last two decades, especially in Europe, has been characterized by a broader range of objectives than mere conservation. Principally,

these include the desire to maximize the economic opportunities presented by the sea via the better organization of maritime activities (Jones at al., 2016). Realizing these opportunities involves the management of both traditional sea uses, including fishing and trade, as well as newer or emerging activities, such as aquaculture and marine renewable energy. MSP seeks to balance the competing objectives of marine activities through an integrative approach to management, creating policy that cuts across sectors, borders and a diverse range of change drivers.

The MSP academic and policy literatures have been dominated by Global North institutions, often underpinned by assumptions that MSP can be exported globally through uniform guidelines and approaches, with little attention paid to local contexts. Although the spread of MSP has been accelerated by the existence of these principles and standards, it is evident that a wide variety of practical MSP approaches are beginning to develop. Variations in the operationalization of MSP are reflective of diverse political contexts, objectives and planning traditions. As MSP continues to develop, we must seek to learn from this diverse experience, to evaluate if MSP will achieve its potential, and to develop approaches that are attuned to social and regional differences (McAteer et al., 2022).

3.8.1 Case Studies

3.8.1.1 Coastal State

Marine Spatial Planning in the North Sea Region

Overview

The North Sea is a marginal sea of the Atlantic Ocean bordered by the United Kingdom, Norway, Denmark, Germany, the Netherlands, Belgium and France. The region is highly industrialized and considered to be a crucial region of the European Union (EU) maritime economy. In terms of marine resource management and planning, the North Sea presents a particular challenge due to the number of maritime states, the number and intensity of marine activities, and their cumulative impacts which cross international boundaries. In most North Sea states, the push for MSP has become urgent given the rise of new uses requiring ocean space, including offshore wind farms and marine protected areas (particularly in Germany, the Netherlands and UK). Increasing demand for renewable energy is driving the development of offshore wind energy. While some ocean uses will remain at their current level, considerable growth is forecasted for mineral extraction, water sport recreation, offshore wind farms, nature protection and mariculture. Other industries include oil and gas extraction, shipping, defense exercise areas, carbon storage, sand extraction, and underwater cultural heritage. Growing concerns of sea level rise affecting North Sea states have further stimulated the MSP discussion.

North Sea states are pursuing development of MSP processes and are each at a different stage of implementation. Approaches also vary, in terms of drivers of the process, governance, quality of data available, involvement of stakeholders, and development priorities. While processes need to be appropriate and suitable to the local socio-political, cultural and environmental conditions, some level of harmonization is also necessary in order to address key elements at an appropriate scale. This case study focuses on these efforts in the context of regional energy demands.

MSP Status

Varying stages between Steps 3 – 842

Organizing the process (pre-planning)

Organizing stakeholder participation

Defining and Analyzing existing conditions

Defining and Analyzing future conditions

Developing and approving the spatial management plan

Implementing and enforcing the spatial management plan

Geography

As noted above, the North Sea is a marginal sea of the Atlantic Ocean and is bordered by the United Kingdom, Norway, Denmark, Germany, the Netherlands, Belgium and France. It connects to the Atlantic Ocean through the English Channel in the south and the Norwegian Sea in the north. It is more than 970 kilometers (600 mi) long and 580 kilometers (360 mi) wide, with an area of around 570,000 square kilometers (220,000 square mi). Historically, the North Sea has featured prominently in geopolitical and military affairs, particularly in Northern Europe but also globally. The coast of the North Sea presents a diversity of geological and geographical features. In the north, deep fjords and sheer cliffs mark the Norwegian and Scottish coastlines, whereas in the south it consists primarily of sandy beaches and wide mudflats.

Background

Due to the dense population, heavy industrialization, and intense use of the sea and coastal areas, there have been a number of environmental issues affecting the sea's ecosystems. Environmental concerns including overfishing, industrial and agricultural runoff, dredging, and dumping, have led to a number of efforts to prevent degradation of the sea while still making use of its economic potential.

In the EU, the 2014 Maritime Spatial Planning Directive requires the development of marine spatial plans by maritime Member States as soon as possible, at the latest by 31 March 2021, and is a recognized tool for enabling development of the Blue Economy and pursuing the European Commission's Blue Growth Strategy. In March 2015, the EU Committee published a report entitled The North Sea under Pressure: Is Regional Marine Co-operation the Answer? which highlights the concentration of activities near the coast and the need to minimize conflicts between existing and new offshore uses and interests.

Cooperation in the North Sea basin is not new. OSPAR is the key organization promoting regional co-operation for the North East Atlantic marine environment. In 2010, Ministers attending OSPAR affirmed its role in facilitating the coordinated and coherent implementation of the Marine Strategy Framework Directive to lead to a regional implementation framework. The MSP Directive also calls for cooperation between Member States.

The North Sea is one of the busiest maritime areas in the world. Countries bordering the North Sea each have spatial claims, cross-cutting ecosystem boundaries, a variety of user groups, different governing systems, a shortage of cross-boundary mechanisms for settling disputes and pressing demands for environmental protection. There are a number of legal, regulatory and policy obstacles to the development of a region-wide marine spatial plan. For example, there are conflicts between national laws and regulation, multiple requirements exist for permits and environmental impact assessments and legal questions exist regarding states' rights to undertake activities and exercise jurisdiction.

As stated by the European Commission in 2009, despite these challenges, "...each country's territorial or jurisdictional waters are part of a dynamic global system connected by shifting winds, seasonal currents and migrating species. Therefore, analysing the processes that govern the present state and future behaviour of these waters cannot rely exclusively on data collected within a country's own jurisdiction. Cooperation across borders is needed".

Context: Offshore Renewable Energy

In 2014, the EU 2030 Framework for Climate and Energy reaffirmed its support to the development of renewable energy, including marine renewable energy. A new target regarding the share of renewable energy in the total consumption of EU electricity has been set at 27% for 2030. As of 1 July 2014, over 2,300 offshore wind turbines from 73 wind farms in 11 countries were connected to the European electricity grid for a total capacity of 7,343 MW.49 By 2020, the offshore wind total installed capacity is projected to be 43 GW, representing 3% of EU`s total electricity consumption.

Offshore renewable energy includes energy produced from wind, wave, current, tidal, temperature or salinity sources. These technologies are at different development stages and relate to different offshore environments. While each renewable energy source requires specific devices, which will have different spatial characteristics, offshore renewable energy industries do face similar challenges. Production is variable and its integration in the general energy market is challenging, partly because of transmission issues and partly because of the difficulty in storing surplus electricity when generating conditions do not match up with consumption needs. In order to address the problem, some solutions are being studied such as the possibility of transforming electricity into gas and incorporating it in gas-powered energy systems. These innovations will have an impact on sea space occupied.

Given the number of countries involved, the type of energy planning process raises its own set of challenges. For example, the responsibility of Federal and State Ministries and authorities require intensive exchange and coordination between all parties involved. In order to move forward, the planning process must provide adequate time, information, and transparency to empower decision-making location and technology.

Stakeholder Engagement

While the MSP Directive calls for stakeholder engagement early in the planning process, regional stakeholders consistently express the need for a more unified outreach, especially for plan preparation, implementation and enforcement. Specifically, many in the region are seeking models to engage a user-led MSP approach across borders.

Engaging stakeholders at various scales is important, especially in a multi-jurisdictional region like the North Sea, from local communities to national stakeholders and from sectors, scientists and governments at the regional seas level. Coordination of Member State plans also requires engagement across sectors and countries. Some planning bodies maintain stakeholder liaison groups that enable stakeholders to join pre-planning events, receive information quickly, and pursue opportunities to network with other stakeholders. Even with these opportunities, a remaining challenge for Member States is that the region lacks formal mechanisms for the States to coordinate. The benefit of formal interactions can be seen from the MASPNOSE project which encouraged cross-border cooperation on MSP in the Thornton Bank.

The MASPNOSE project was initiated to facilitate cross-border cooperation between neighboring Member States; the Thornton Bank between Belgium and the Netherlands was one of the areas identified where increased cross-border cooperation was needed. The MAPNOSE project increased informal cross-border cooperation between governmental stakeholders in order to find common development objectives.

Informal networks also exist which can help to bridge the stakeholder engagement gap. For example, the Celtic Seas Partnership (UK, Ireland & France) offers new opportunities for stakeholders to engage more directly in cross-border marine management. It highlights the role of voluntary participation facilitated alongside the statutory consultation requirements for the MSP Directive. Partnerships with a neutral Secretariat have been created to bring people together at the local and project-level over recent decades; one such example is engaging coastal communities through Local Coastal Partnerships in England.

Other information groups include the MSP Research Network, an informal grouping of scientists, policy-makers and practitioners who wish to contribute to the development of marine spatial planning through academic-based research. Additionally, the ICES Working Group Marine Planning and Coastal Zone Management (WGMPCZM) discusses current developments around Marine Spatial Planning (MSP) and Coastal Zone Management in the ICES area.

Early stakeholder engagement can secure a more appropriate and balanced outcome for sectors, provide an understanding of user needs, clarify actual versus perceived conflicts, and provide early insight into planning implications of MSP, enabling user input and feedback. Using the momentum from the informal networks can help to create more formalized mechanisms for the region as a whole.

Achievements and Challenges

The leadership shown at the EU and Member State levels to initiate and implement MSP in the North Sea region has enabled a strong network of MSP efforts. Those efforts are helping to provide more certainty for investors, particularly for projects which require many years of lead time for planning. In addition, existing MSP efforts are encouraging the colocation of uses such as tourism and offshore developments like wind farms in order to optimize benefits. Adding other uses within existing situations or the realization of a co-location project is often difficult; to achieve spatial synergies, long-term options for multiple uses need to be presented at an early stage in the planning process and discussed with stakeholders. An example of such synergies between the offshore wind and tourism sectors is in the Scroby Sands wind farm located in the United Kingdom at 2.5 km from the east coast. The wind farm was one of the first to be operational in the UK (2005) and consists of 30 turbines with a capacity of 2MW. Seasonal boat tours take place to observe wind farms and marine mammals.

MSP in the North Sea Region can also benefit from common information bases. Different regulatory bodies and sectors can use MSP data to make decisions including biophysical and ecological information, human use aspects, distribution of activities and planning for future activities. Ocean industries also make contributions to data and information gathering, sharing and analyzing. For example, EMODnet, the European Marine Observation and Data Network, consists of more than 100 organizations assembling marine data, products and metadata to make these fragmented resources more available. EMODnet is currently in its second development phase with the target to be fully deployed by 2020.

The MSP Directive requires that Member States bordering marine waters shall cooperate with their neighbors across the marine region when establishing their maritime plans. Cooperation aimed at sharing knowledge, skills development and experience is crucial for balancing current and future development. In the case of offshore wind energy, experiences show that cross-border cooperation in MSP can deliver cost reductions.

Cooperation on MSP also can facilitate the alignment of timing and the sharing of intentions concerning necessary infrastructure. New management measures in one Member State may also have an impact on navigation patterns and safety in another one. Early cross-border consultation allows the sharing of best practices and gathering information to be considered in national plans.

Challenges remain in bringing these multi-sector and multi-jurisdictional efforts together. Regional ocean industries seek clarity of the relationship between MSP and other governance mechanisms. The numerous jurisdictions and layers of authority complicate MSP processes and MSP needs to take into account existing regulatory and management regimes rather than planning separately. Questions also remain about the appropriate roles for EU Member States and the EC. The EC has

tried to initiate a number of preparatory projects for cooperation and harmonization but there is still a question around who will lead MSP in the region. In this region in particular, MSP needs to move toward consistency as much as possible.

Additional Information

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UNESCO Summaries: Marine Spatial Planning Efforts in the North Sea

European Commission:
http://ec.europa.eu/maritimeaffairs/policy/maritime_spatial_planning/index_en.htm

Belgium:
http://www.unesco-ioc-marinesp.be/spatial_management_practice/belgium

France:
http://www.unesco-ioc-marinesp.be/msp_around_the_world/france

Germany – North and Baltic Seas:

http://www.unesco-ioc-marinesp.be/msp_practice/germany_north_baltic_seas

The Netherlands:
http://www.unesco-ioc-marinesp.be/spatial_management_practice/the_netherlands

Norway – Norwegian Seas and North Sea:
http://www.unesco-ioc-marinesp.be/msp_around_the_world/norway_norwegian_sea

United Kingdom:
http://www.unesco-ioc-marinesp.be/msp_around_the_world/united_kingdom

More information is available at http://www.emodnet.eu/.

MSP Directive, Article 11, available at http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2014.257.01.0135.01.ENG.

South Baltic OFF.E.R, OFFSHORE WIND ENERGY IN THE SOUTH BALTIC REGION - CHALLENGES & OPPORTUNITIES (2013), available at http://www.southbaltic-offshore.eu/reports-studies/img/OFFER_FINAL_PUBLICATION_FINAL_VERSION.pdf.

More information is available at http://www.coastalpartnershipsnetwork.org.uk/.

More information is available at http://www.msprn.net/.

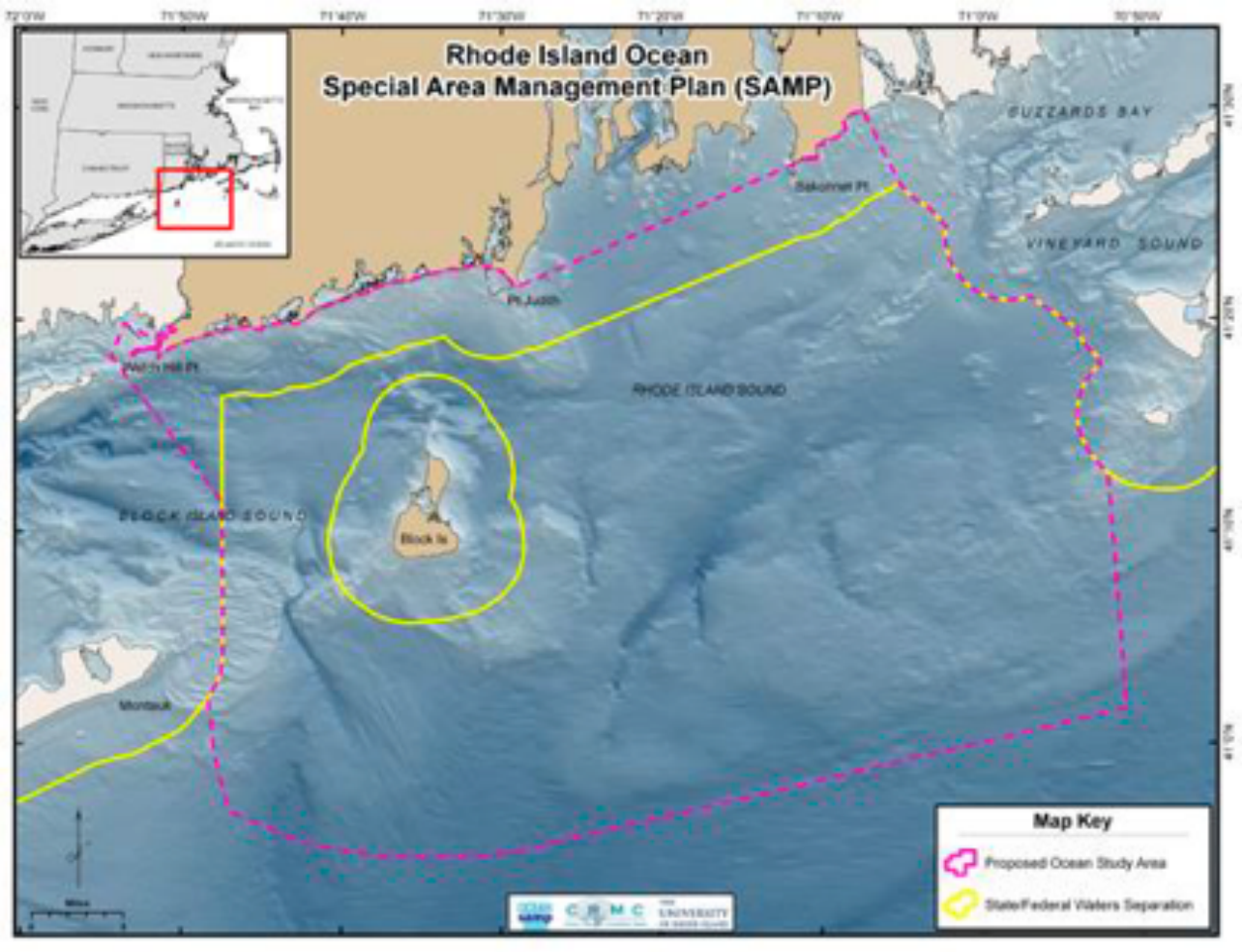
More information is available at http://www.ices.dk/community/groups/Pages/WGMPCZM.aspx.

For a variety of regional responses regarding stakeholder engagement, see European Commission, Stakeholder Consultation on MSP and ICZM Summary Results (2011), available at http://ec.europa.eu/dgs/maritimeaffairs_fisheries/consultations/msp/summary-results-of-msp-questionnaire_en.pdf.

59 Greater Yarmouth Tourism, Wind Farms, available at http://wwww.grat-yarmouth.co.uk/things-to-do/wind-farms.aspx.

3.8.1.2 Island State

RHODE ISLAND OCEAN SPECIAL AREA MANAGEMENT PLAN



Overview

The Rhode Island Ocean Special Area Management Plan, or Ocean SAMP, came about from a research and planning process that integrated science with stakeholder involvement. Adopted in 2010, the resulting plan serves as a federally recognized coastal management and regulatory tool. Beginning in 2015, the revision of the Ocean SAMP began including a Recreation and Tourism Chapter, stakeholder engagement, and the creation of a summary report.

MSP Status

Adapting the marine spatial management process

Geography

The Ocean SAMP area extends 30 miles off the coast of Rhode Island in the Northeast region of the U.S. Its approximately 1,500 square miles consists of portions of the Block Island Sound, Rhode Island Sound, and the open Atlantic Ocean. The Ocean SAMP area includes state and federal waters and abuts the state waters of Connecticut, Massachusetts, and New York.

Background

The Rhode Island Coastal Resources Management Council (CRMC) is authorized under the federal Coastal Zone Management Act of 1972 (CZMA) to develop and implement Special Area Management Plans (SAMPs) to address specific regional issues. SAMPS are broadly defined in the CZMA as "plans which provide for increased specificity in protecting significant natural resources, reasonable coastal-dependent economic growth, improved protection of life and property in hazardous areas, including those areas affected by land subsidence, sea level rise, or fluctuating water levels of the Great Lakes, and improved predictability in governmental decision making. "CRMC describes these plans as "ecosystem-based management strategies that are consistent with the council's legislative mandate to preserve and restore ecological systems. "The CRMC coordinates with local municipalities, as well as government agencies and community organizations, to prepare the SAMPs and implement the management strategies.

Led by CRMC, government agencies, university scientists and stakeholders participated in a multi-year process to develop the Ocean SAMP. In 2010, the Ocean SAMP was adopted as a comprehensive plan for the state to ensure the management and protection of its ocean resources and activities. It was adopted by the National Oceanic and Administration (NOAA) on May 11, 2011.

CRMC describes the Ocean SAMP process as an ongoing research and planning process to define how Rhode Island's waters can be best utilized. The initial driver for the plan was wind farm development; however, that narrow focus was expanded to zone for management of the diverse activities happening in both state and federal waters. In 2010, following extensive research and stakeholder engagement processes, the two volume Ocean SAMP document was formally approved by the CRMC. Through collaboration with stakeholders and a number of different agencies and organizations, the Ocean SAMP process identified the following goals and principles.

Goals:

1. Foster a properly functioning ecosystem that is both ecologically sound and economically beneficial.
2. Promote and enhance existing uses.
3. Encourage marine-based economic development that meets the aspirations of local communities and is consistent with and complementary to the state's overall economic development, social, and environmental needs and goals.
4. Build a framework for coordinated decision-making between state and federal management agencies.

Principles Guiding SAMP Design and Development included the following:

1. Develop in a transparent manner.
2. Involve all stakeholders.
3. Honor existing activities.
4. Base all decisions on the best available science.
5. Establish monitoring and evaluation that supports adaptive management.

The Ocean SAMP document calls for regular assessment of the Ocean SAMP process and plan in order to facilitate adaptive management and informed decision making. In 2015, the University of Rhode Island Coastal Resources Center, which facilitated plan development for the CRMC, engaged partners and the public in an Ocean SAMP process to update the original document with new policies and scientific data. The work is focused on long-term enhancement of shared ocean resources, including fish stocks, transportation channels, and the siting of offshore renewable energy facilities.

Importantly, the Ocean SAMP accomplished a streamlined regulatory approach; near the end of the planning process, the federal agency NOAA approved the state's extended consistency review over federal waters under the Coastal Zone Management Act. As a result, the SAMP is applied out to 30 miles off the coast and users know what regions are zoned for their proposed use. By following the SAMP, specific uses receive expedited reviews through the state's Coastal Management Plan, as well as federal consistency review over many federal activities within the Ocean SAMP area.

Stakeholder Engagement

Ocean SAMP Stakeholder engagement occurred in a three-phase process with 17 stakeholder meetings during the 20 month period of October 2008 through June 2010. In Phase I, the Stakeholders Process was designed and convened. A stakeholder list was established to include a comprehensive range of parties, though there was no distinction between the public and formal stakeholders. During Phase I, from October 2008 through February 2009, the stakeholders became familiar with the Ocean SAMP and the schedule to produce a draft of the Ocean SAMP, concurred in a process for meetings, and received background issues and uses in the Ocean SAMP area.

During Phase II, from February through October 2009, stakeholders learned about the Ocean SAMP area and were provided information about physical conditions, human uses (fishing, marine transportation, naval activity, recreation and tourism), submerged historic sites, and fauna (birds, marine mammals and turtles, and fish stocks). Phase III, reviewing draft Ocean SAMP chapters, commenced in October 2009 and included a nine-step public review process for chapters of the Ocean SAMP.

Internal analysis of the RI Ocean SAMP revealed little contention regarding the content of the document. Since it was never in the purview of the stakeholder process to formally accept, reject or modify the Ocean SAMP or its individual chapters, no action for or against the Ocean SAMP was taken. It was clearly communicated that "it would not be a function of the stakeholder process to subsume minority views in a consensus position on any issue. The process would rather be guided that the principle that all views would be fairly heard and taken into account." Beyond the public review of the Ocean SAMP, stakeholders also contributed to resolving how fisheries issues could be handled should there be future development in the Ocean Area affecting fishing, a valuable contribution to future collaboration.

Accomplishments & Challenges of MSP

Familiarity with the process of the Ocean SAMP helped to establish comfort and trust early in the process. The Ocean SAMP was based on an existing planning mechanism; users were familiar with the CRMC, the state agency and the process of Special Area Management Planning which had been used in Rhode Island for several decades.

In addition, the CRMC worked with federal agencies throughout the process which led to transparency and helped the process evolve toward concrete policy changes. For example, the regulatory process for the installation of offshore wind turbines was clarified, while planning for minimization of impacts on natural systems and existing activities. The Ocean SAMP identifies a 13 square-mile renewable energy zone in state waters that directs development to a location with the least conflict between existing uses and the natural environment, while streamlining the regulatory process.

The integrated stakeholder approach used throughout the Ocean SAMP process included a variety of public and private stakeholders. The framework constructively engaged major stakeholders including fishermen, alternative energy proponents, environmentalists, scientists, federal and state agencies, the Narragansett Indian tribe, and concerned citizens in the implementation of the Ocean SAMP. The process culminated in the development of both a Fishermen's Advisory Board and Habitat Advisory Board, which facilitated continued participation by relevant stakeholders and acted as a mechanism for updating Ocean SAMP information.

A continuous challenge for the Ocean SAMP is the lack of formal commitment for funding the ongoing Ocean SAMP refinement and implementation. In addition, recent stakeholder engagement has decreased. Many cited participation fatigue because of the high number of meetings and noted that combining meetings may be an option in the future. Private sector participants highlighted that World Ocean Council 34 MSP Case Studies 2016 participation requires sacrifices in time or resources and that participation needs to be worthy of those sacrifices.

Furthermore, the perception of wind farm development as the main driver for the process may have negatively affected the perceived transparency of the process. Internal analysis revealed that "the overlapping timeline for choosing a preferred developer by the State of Rhode Island with the Ocean SAMP planning process impacted some stakeholders' perceptions of the transparency of the process. This made some interview participants feel like wind development was a 'done deal,' and that the Ocean SAMP planning process was an effort to rubber stamp projects to accelerate wind development."

Finally, the large number of involved agencies and organizations and their relationships led to a lack of clarity in understanding the specific roles of each agency within the Ocean SAMP process. Clarity of the process can be improved with better communication across agencies and between the different stakeholder groups. Increasing clarity of the relationships among agencies and the responsibilities of those agencies within the Ocean SAMP process would also benefit the overall transparency of the process.

Authority: Coastal Zone Management Act of 1972 and a 2007 request by Governor's Energy Office

Lead Planning Agency: Rhode Island Coastal Resources Management Council

Size of Planning Area: 3,800 km2 (State waters of Rhode Island), although for planning analyses, the "analytical boundary" was extended into federal waters to 20 nautical miles

Drivers of MSP: Wind farm siting

Stakeholder participation: Extensive throughout the MSP process, and will continue through implementation phase; an Ocean SAMP stakeholder group has been an integral part of both determining the scope and contents of the plan as well as refining its policies and management measures

Sectors included in planning: All, including fishing

Relation to coastal management: The Ocean SAMP is integrated into the Rhode Island Coastal Resource Management Program

Relation to marine protected area management: Existing MPAs were considered as "constraints" in the MSP process, i.e., their boundaries would not be changed; no new MPAs suggested as part of process

Plan approval: Approved by Rhode Island in May 2011; approved by U.S. National Oceanic and Atmospheric Administration also in May 2011

Legal Status of Plan: Regulatory and enforceable

Plan revision: Major review required every five years

Performance monitoring and evaluation: One of the principles of the plan is to establish monitoring and evaluation that supports adaptive management; however, monitoring discussions in plan focus on ambient monitoring or monitoring effects of specific programs or projects unrelated to management measures of plan.

References

Web-based Maps
http://www.narrbay.org/d_projects/OceanSAMP/LiveMap/index.html

Plan Documents
http://seagrant.gso.uri.edu/oceansamp/documents.html84

UNESCO Summary: Key elements of Marine Spatial Planning in the State of Rhode Island
http://www.unesco-ioc-marinesp.be/msp_around_the_world/united_states_rhode_island

Information regarding Special Area Management Plans in Rhode Island is available at http://www.crmc.ri.gov/samps.html.

All CRMC process documents are available at http://www.crmc.ri.gov/samp_ocean_archive.html.

Kate Mulvaney, First Biennial Assessment of the Rhode Island Ocean Special Area Management Plan Process (November 2013), available at http://seagrant.gso.uri.edu/oceansamp/pdf/documents/doc_osamp_evaluation.pdf.

Ken Payne, Report of the Ocean Special Area Management Plan Stakeholder Process at 3, 30 June 2010, available at http://seagrant.gso.uri.edu/oceansamp/pdf/appendix/22Payne_stakeholders.pdf.

CHAPTER 4: Detailed Situation Analysis of the Status of Marine Spatial Planning in SADC Coastal States

4.1 Introduction

The situation analysis is basically the process of critically evaluating the internal and external conditions that affect an organization (in this case SADC), which is done prior to a new initiative or project. It provides the knowledge to identify the current opportunities and challenges to your organization, service or product. This in turn helps with devising a strategy to move forward from your current situation to your desired situation. We have applied this method here to understand the current situation in terms of MSP in SADC countries and what the future may hold for the member states.

The situation analysis looks at the current situation in terms of Marine Spatial Planning in SADC Coastal and Island States. The progression of the development of MSP (before, current, and future). Marine Spatial Planning (MSP) is identified as one of the enablers or tools for the sustainable implementation of the Blue Economy strategy. The countries that have developed their Blue Economy strategy, would need to have MSP in place, which will ease the allocation of ocean space to multiple and often conflicting users of the ocean (just like ICZM). Thus, situation analysis of each costal and island state in SADC is imperative. We will take a closer look at the following Coastal states: Democratic Republic of Congo (DRC); Angola, Namibia, South Africa (SA); Mozambique, Tanzania. Then the Island states: Comoros, Madagascar, Mauritius, and Seychelles (Table 1).

4.2 Review of Marine Spatial Planning (MSP) in SADC Coastal and Island States.

All information collated from various sources were synthesised and summarised into infographic maps below (Figures 4 – 13).

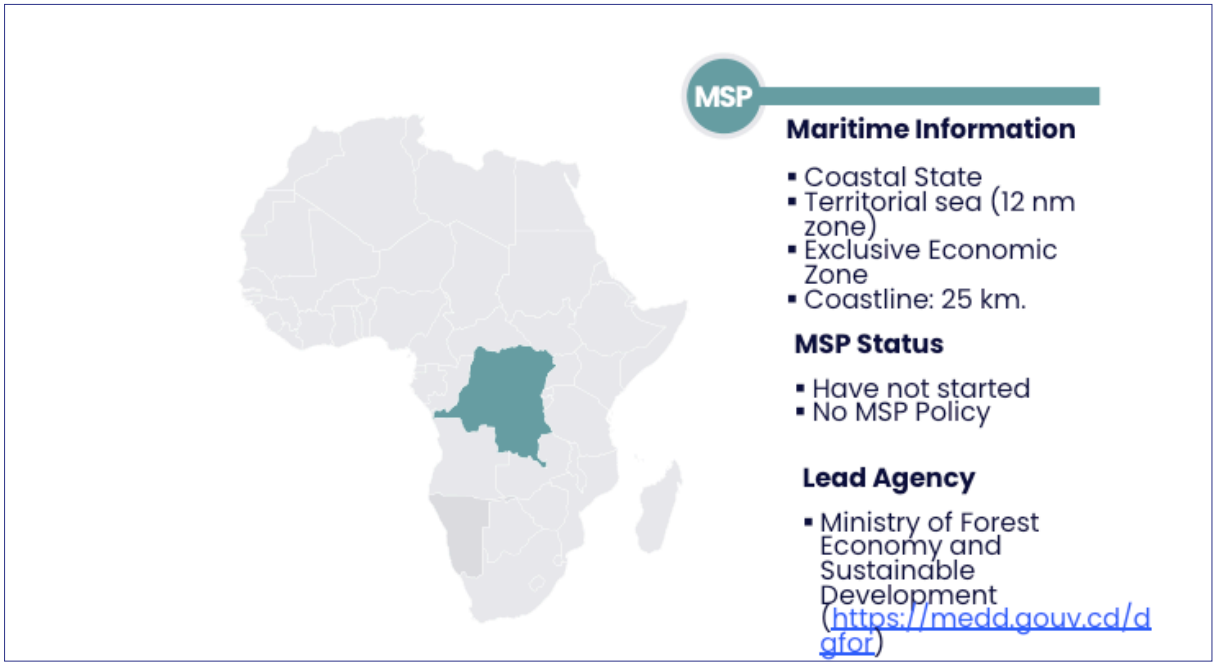


Figure 4: Marine Spatial Planning in the Democratic Republic of Congo (DRC), 2022.

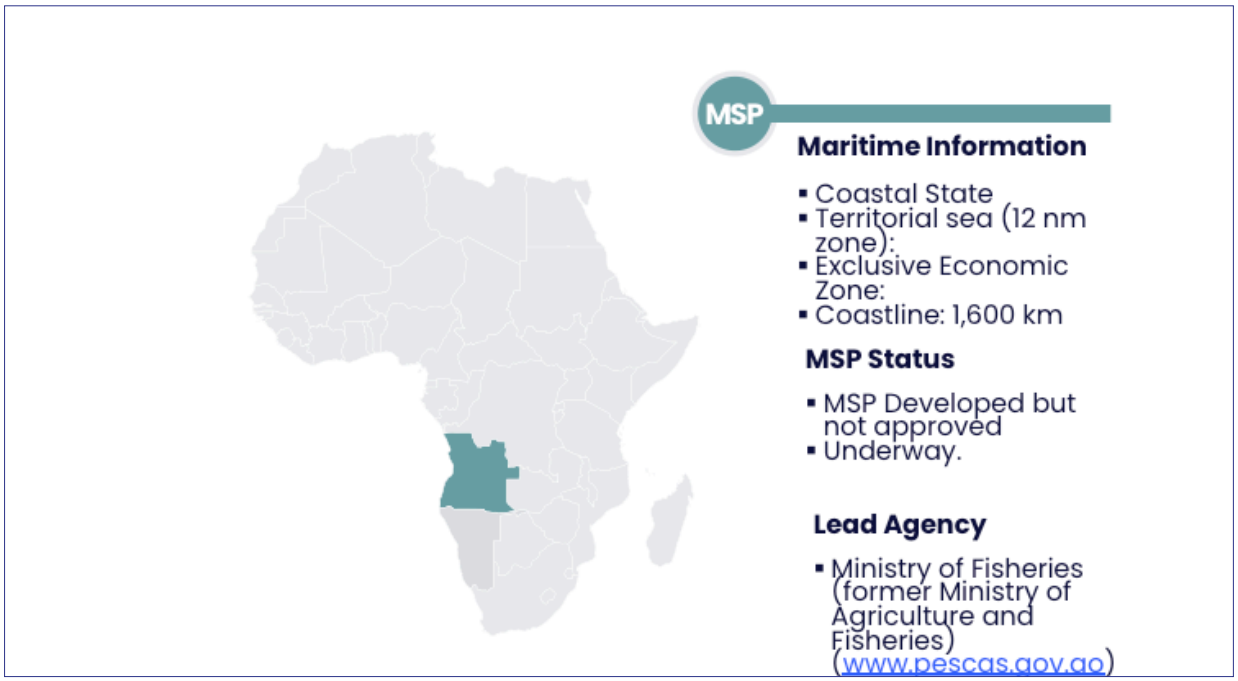


Figure 5: Marine Spatial Planning in Angola, 2022.

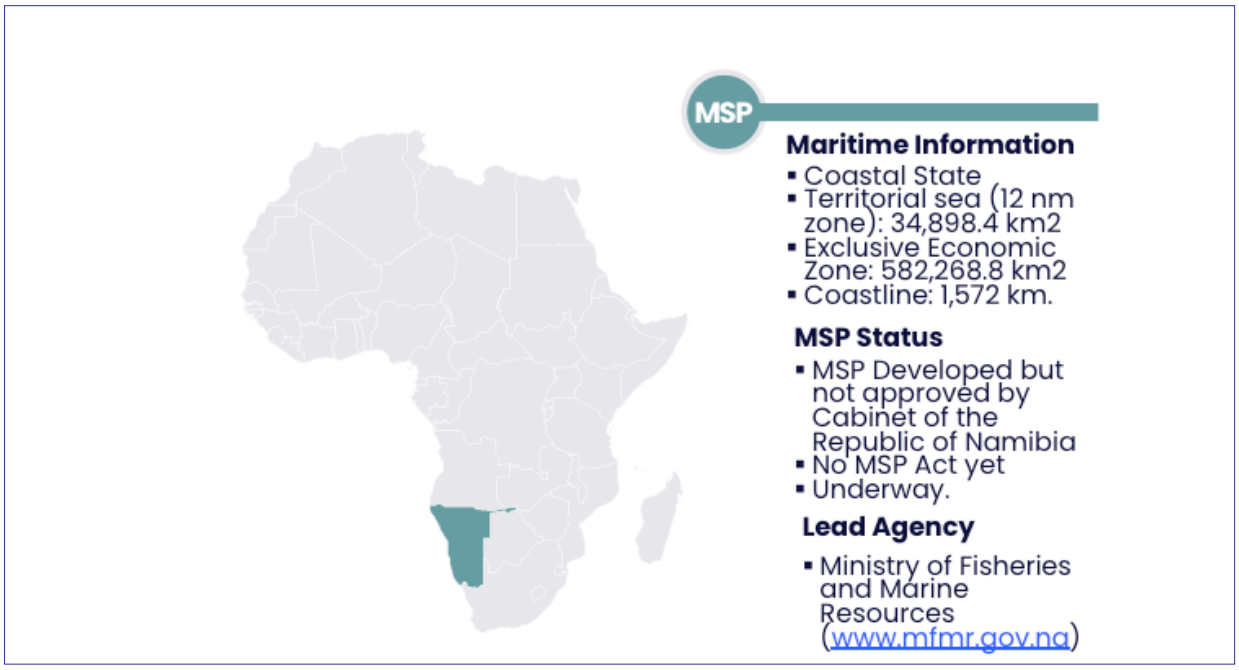


Figure 6: Marine Spatial Planning in Namibia, 2022.

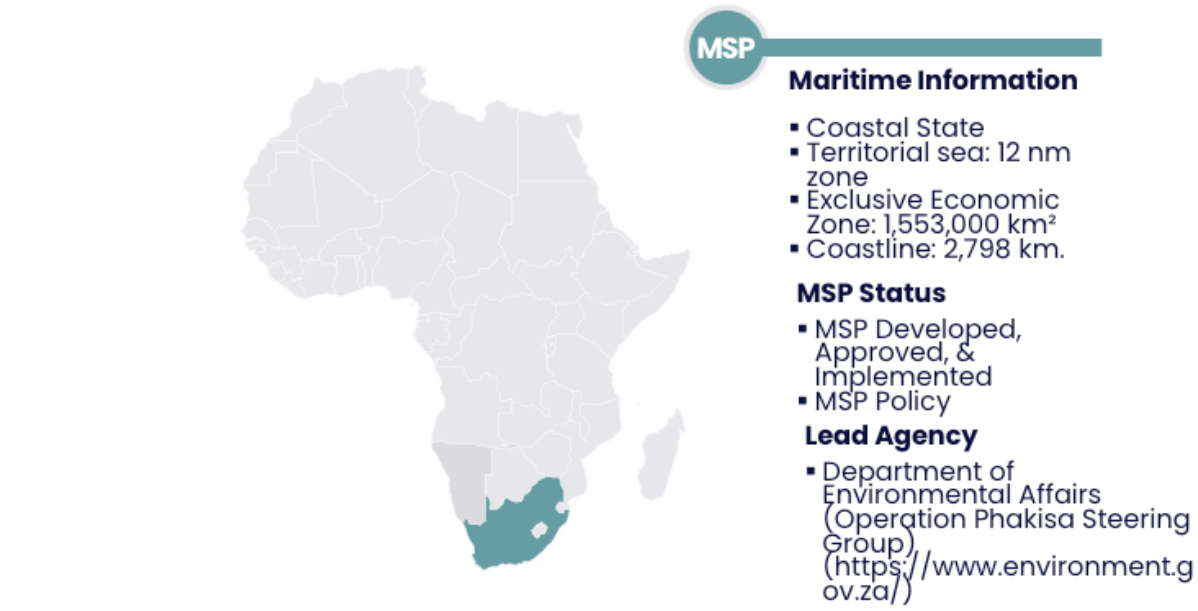


Figure 7: Marine Spatial Planning in South Africa, 2022.

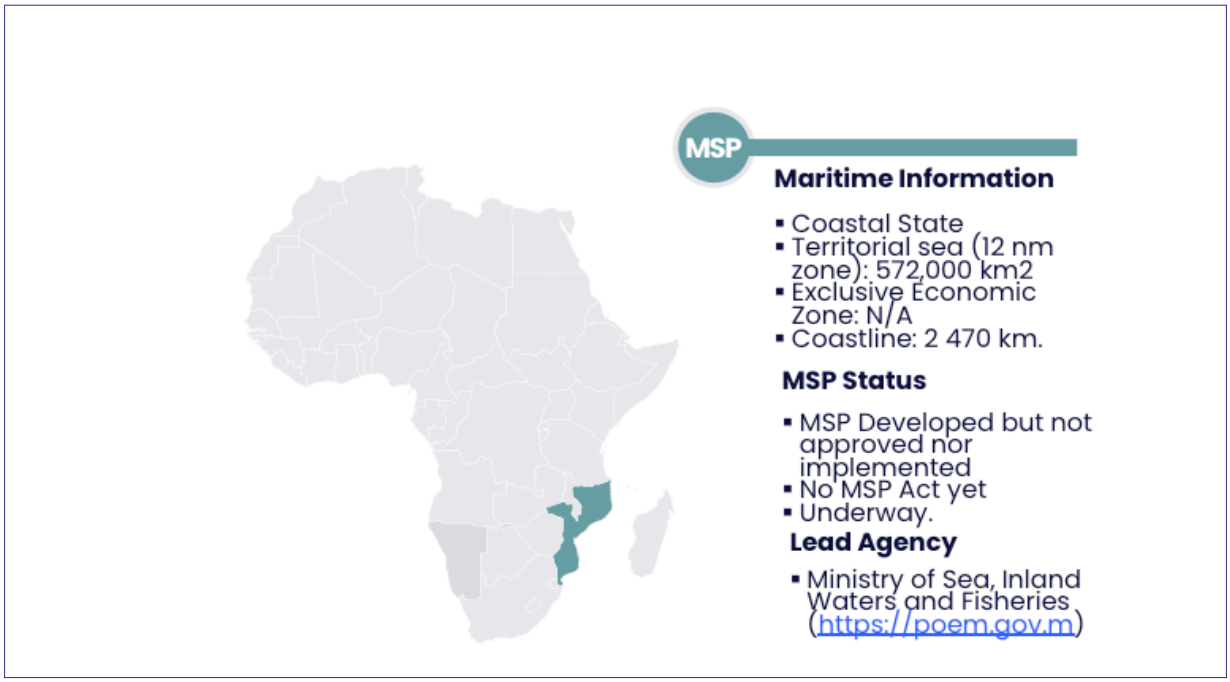


Figure 8: Marine Spatial Planning in Mozambique, 2022.

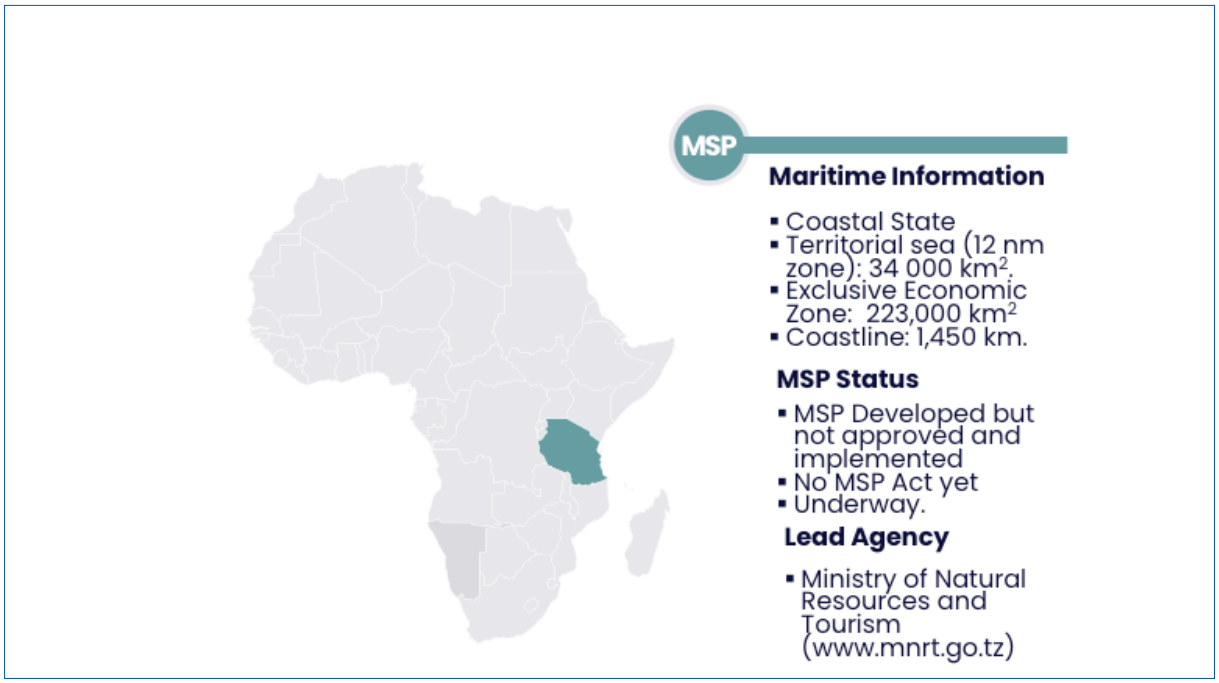


Figure 9: Marine Spatial Planning in Tanzania, 2022.

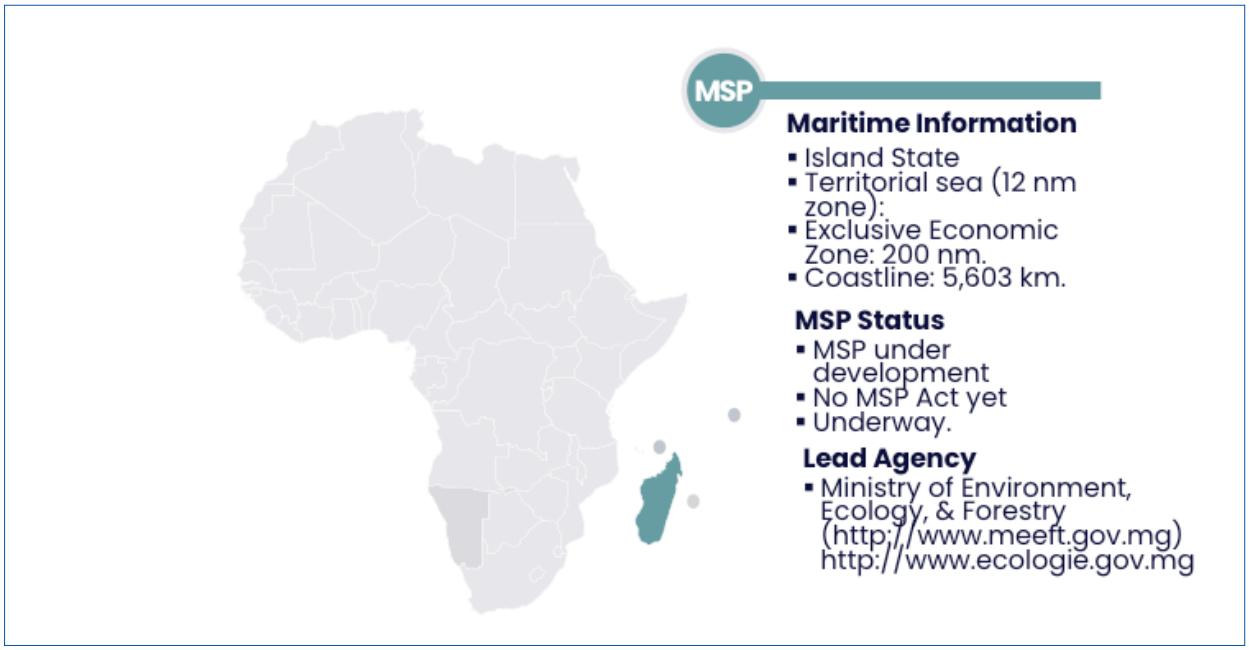


Figure 10: Marine Spatial Planning in Madagascar, 2022.

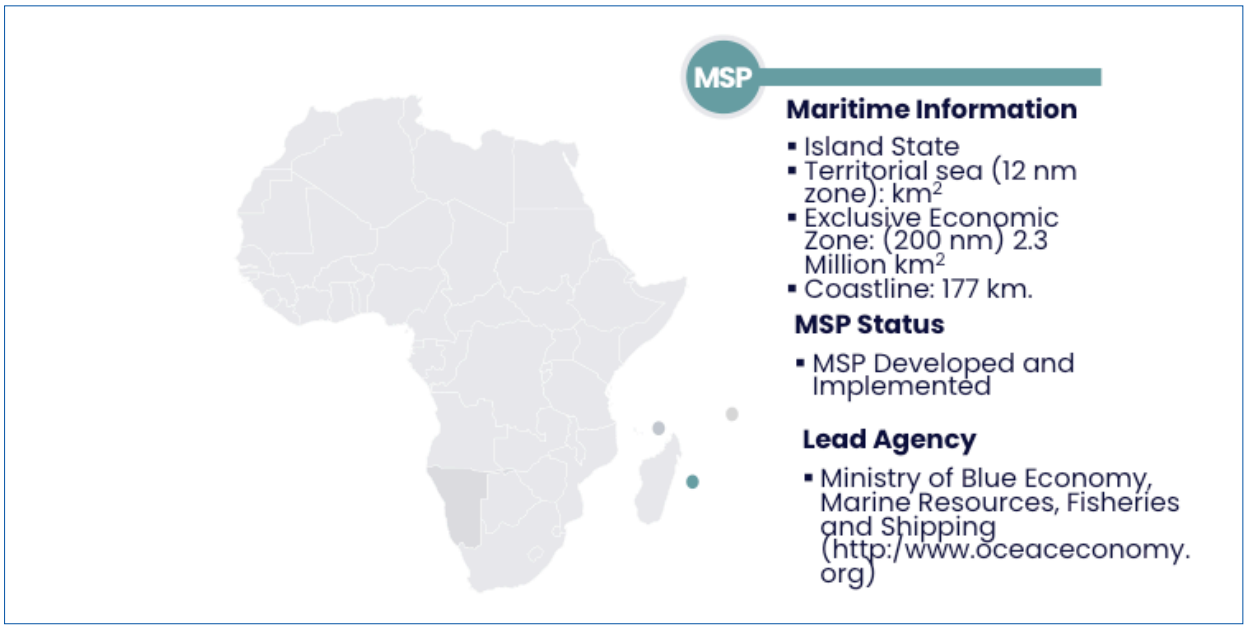


Figure 11: Marine Spatial Planning in Mauritius, 2022.

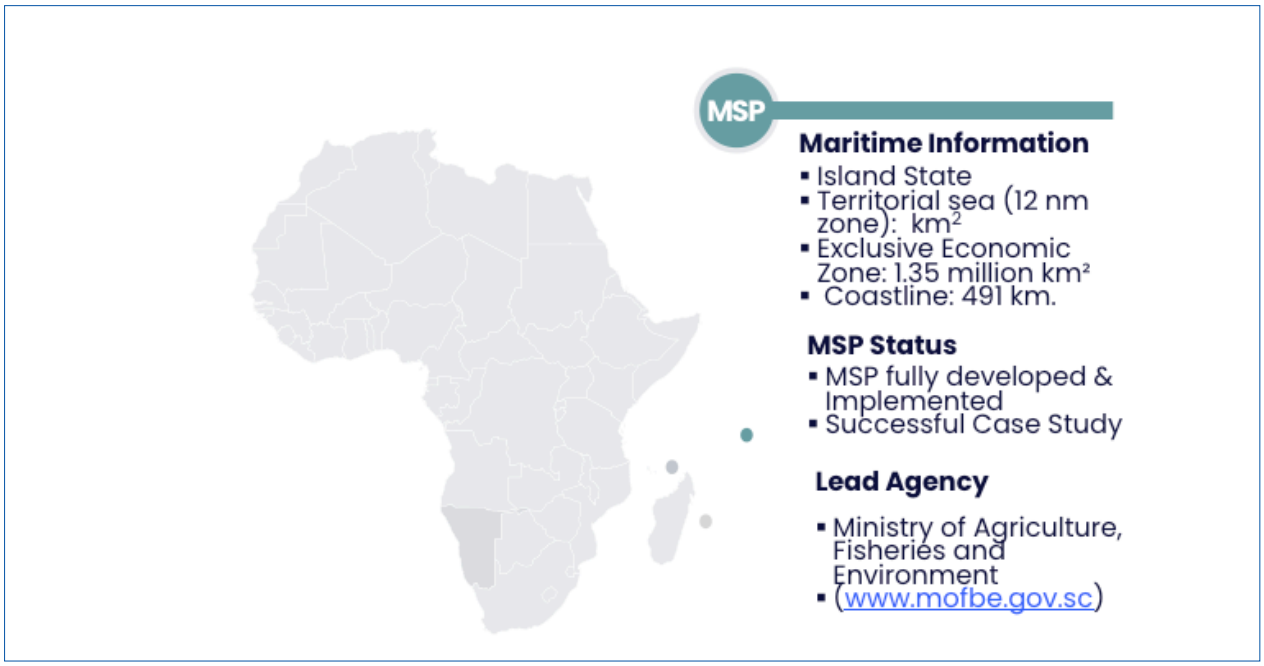


Figure 12: Marine Spatial Planning in Seychelles, 2022.

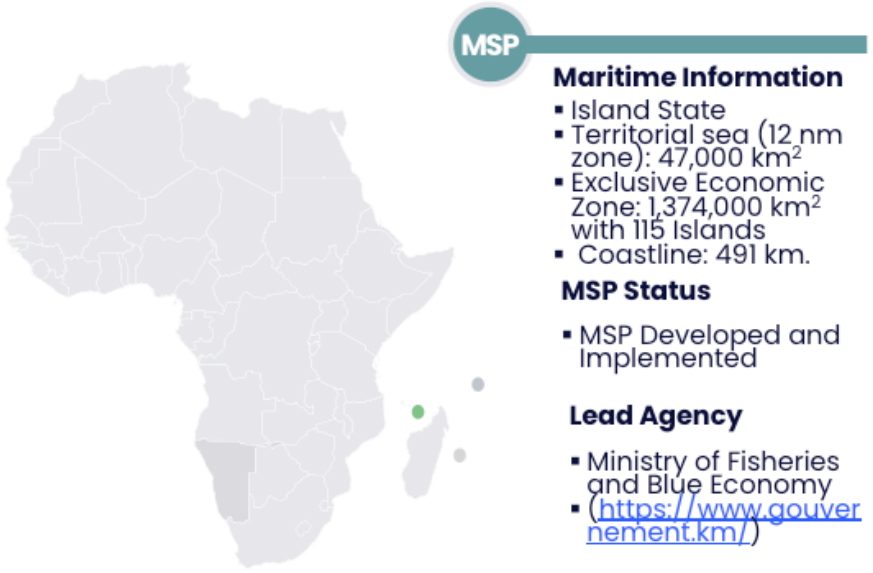


Figure 13: Marine Spatial Planning in Comoros, 2022.

4.3 Situation Analysis for MSP in SADC region

Marine spatial planning (MSP) is a process that aims to balance competing demands for space and resources in the marine environment while preserving ecological, economic, and social values. In the Southern African Development Community (SADC) region, MSP is becoming increasingly important due to the growing demand for marine resources and the need to protect vulnerable marine ecosystems. Here's a situation analysis for MSP in the SADC region:

Legal Framework: The SADC region has a number of legal instruments related to MSP, including the SADC Protocol on Fisheries, the Protocol on Environmental Management for Sustainable Development, and the African Maritime Charter. However, there is a lack of clarity and consistency in how these instruments are implemented, which creates uncertainty for stakeholders and makes it difficult to achieve effective MSP.

Institutional Capacity: There are a number of institutions responsible for MSP in the SADC region, including national and regional bodies. However, many of these institutions lack the capacity and resources to effectively carry out their mandates. This is particularly true at the national level, where there is often a lack of technical expertise and institutional coordination.

Data and Information: One of the biggest challenges facing MSP in the SADC region is a lack of data and information. This makes it difficult to make informed decisions about the use of marine resources and to identify areas of ecological significance. There is a need for more robust data collection and sharing mechanisms to support MSP.

Stakeholder Engagement: Effective MSP requires the involvement of a wide range of stakeholders, including government agencies, industry, civil society, and local communities. However, stakeholder engagement in the SADC region is often ad hoc and lacks a clear framework. This can lead to conflict and delays in the MSP process.

Transboundary Cooperation: Many marine ecosystems in the SADC region are transboundary, which requires cooperation between countries to effectively manage them. However, there are often political and institutional barriers to cooperation, which can make it difficult to achieve effective MSP.

Marine Spatial Planning in the SADC region faces a number of challenges related to legal frameworks, institutional capacity, data and information, stakeholder engagement, and transboundary cooperation. Addressing these challenges will require a coordinated effort by governments, civil society, and the private sector to build capacity, improve coordination, and foster greater stakeholder participation in the MSP process.

4.4. Policy for Marine Spatial Planning

The Southern African Development Community (SADC) region should develop a policy framework for Marine Spatial Planning (MSP) to guide the sustainable use of the region's coastal and marine resources. The policy should aim to promote the conservation, protection, and sustainable use of marine and coastal ecosystems and resources, as well as the equitable sharing of benefits derived from them.

The SADC MSP policy framework should consists of four key components:

i. Governance and institutional arrangements: This component aims to establish effective governance structures and institutional arrangements for MSP at the national, regional, and transboundary levels.

ii. Ecosystem-based approach: The policy advocates for an ecosystem-based approach to MSP, which seeks to balance the economic, social, and environmental needs of coastal and marine ecosystems.

iii. Stakeholder engagement and participation: The policy recognizes the importance of stakeholder engagement and participation in MSP decision-making processes to ensure that the needs and aspirations of all stakeholders are taken into account.

iv. Data and information management: The policy recognizes the importance of accurate and up-to-date data and information for MSP decision-making processes.

The SADC MSP policy framework should also emphasize the need for collaboration and coordination among Member States to address transboundary issues, such as shared fish stocks and marine pollution.

The SADC MSP policy framework would provide a comprehensive and integrated approach to the sustainable management of the region's coastal and marine resources, which can help to ensure their long-term conservation and equitable use for the benefit of present and future generations.

CHAPTER 5: Results from the MSP survey in SADC Countries

5.1 Background

The SADC Coastal and Island States are well endowed with natural resources, which makes the centre-stage for the sustainable development of the blue economy. Data and information sharing plays a very important role in analyses of the MSP current situation pertaining to the SADC region. Literature sources that were collated was used for the situation analysis, however there were some gaps in data, which needed and extra effort to obtain, thus a survey was conducted.

5.2 Methodology for the survey

Both quantitative and qualitative sampling methods were applied during the survey. Key informants were drawn from the Blue Economy Focal Point Persons from the SADC Member States covered by the study, and these were requested to participate in the survey. The participants had to give their consent to participant in the survey before proceeding with the questionnaire or interviews. Ten SADC countries (4 Coastal) and (4 Island) states were targeted for the survey. The survey ran for at least two months ending the 30 March 2023.

5.3 Results & Discussion

The results of the survey are shown pie charts and bar graphs below. About 90% of the respondents indicated that there is MSP in their countries and only a mere 10% had no MSP in the country (Figure 14). With regards to the status of MSP in SADC coastal and Island states, out of 11 respondents, 4 indicated that (about 36% of the respondents) MSP is at the initial stage in their countries and 3 respondents (about 27 %) indicated that MSP is fully developed their counties but not endorsed by government; 2 respondents (18%) indicated that MSP is fully developed and implemented in their countries, and 2 respondents (18%) indicated others.. Notably there are serious discrepancies on the data particularly on the fully developed and implemented MSP, as we know some countries that have fully developed and implemented their MSP plans (Figure 15). This could be attributed to limited number of responses covering the entire SADC region or lack of knowledge by the key informants. About 92% of the respondents indicated that there is a link between MSP and the blue economy (

Figure 14: Showing results for the existence of MSP in the SADC region (●) YES (10) and (●) NO (4).

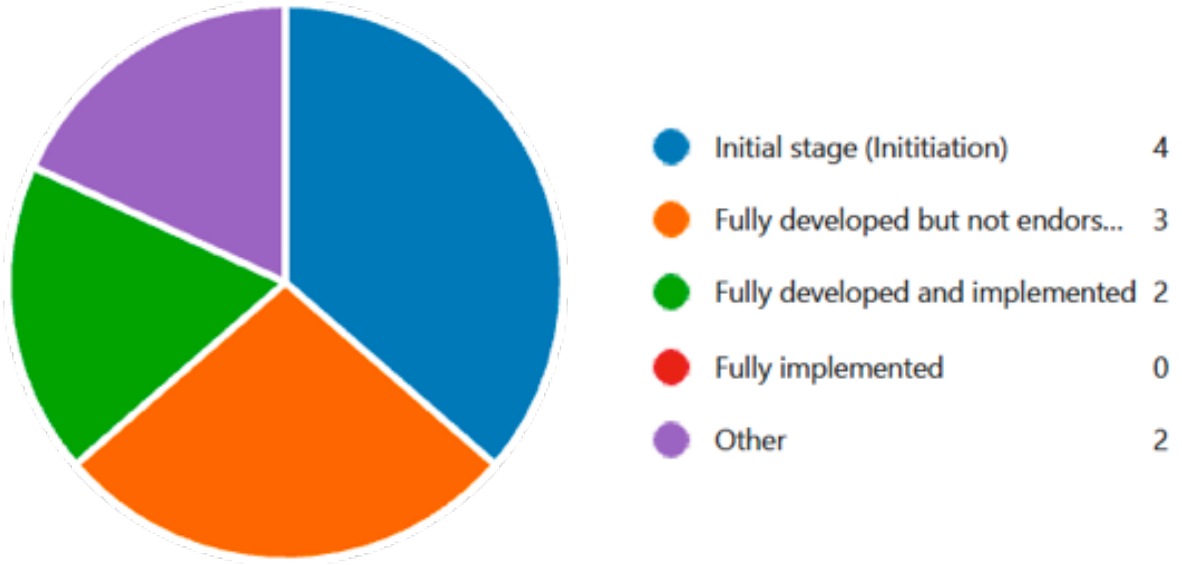


Figure 15: What is the Status of MSP in your country?

Figure 16: Do you think there is link between MSP and Blue Economy?

Figure 17: Is there a Legal Framework for MSP in your country?

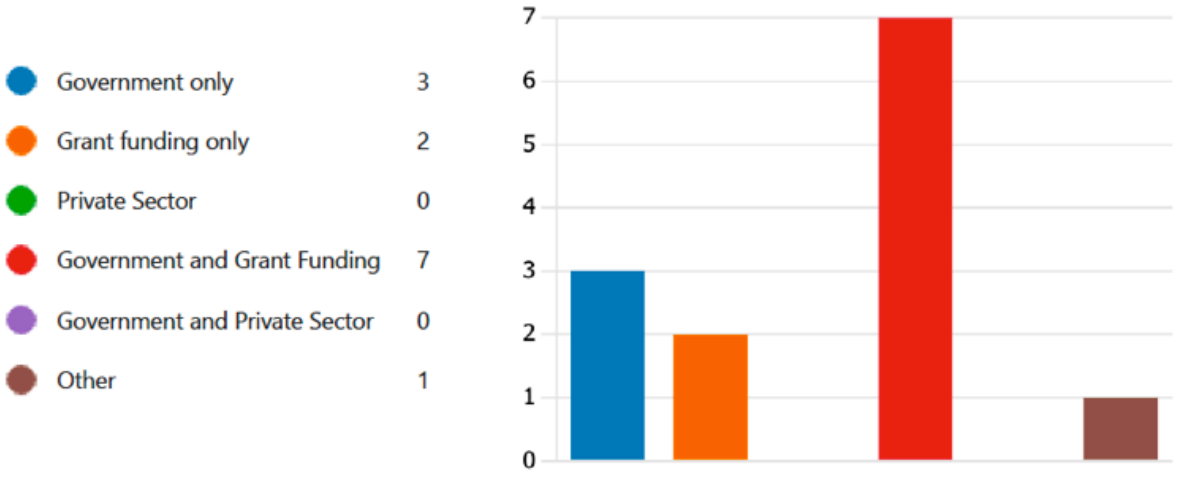


Figure 18: Who funded the MSP development in your country?

About 64% of respondents said there a legal framework for MSP in their countries, and 35.7% said no legal framework for MSP in their country (Figure 17). This points to the lack legal framework under which MSP should operate. SADC could assist the member states in drafting a more harmonised policy on MSP at regional level, which can deal with transboundary issues in MSP.

Funding for the development of MSP presents yet another hurdle during the development stage of the MSP roadmap. Countries which have MSP were funded in various ways, whereby out of 13 respondents, about 7 respondents (53.8%) % were funded by government and grants; about 3 respondents indicated (23 %) Government funding only; 2 respondents indicated (15.38%) grant funding only; and 1 (7.6%) respondent indicated others forms of funding (Figure 18). Thus, the most common funding mechanism was the government and grant funding. This somehow validates the involvement of national government from the beginning of the MSP development process to the end, which is quite important since the citizens should own the project.

CHAPTER 6: A Step-by Step Guide on how to implement MSP in the Blue Economy in SADC.

6.1 Introduction

This guide aims to support the work of planners, experts and stakeholders in SADC Member States. It presents a practical, stepwise approach for incorporating Marine Spatial Planning (MSP) in the implementation of the Sustainable Blue Economy. It is aimed at officials preparing the plans, experts supporting their work, as well as stakeholders involved in the preparation and implementation of maritime spatial plans. Within the overall method presented here, this guidance also includes a practical method to monitor and evaluate MSP in the Implementation of the SADC Blue Economy Strategy.

The preparation of this guide is based on reviewing of the existing literature with relevance to the topic, and incorporated lessons learned from some case studies from different regional seas dealing with MSP.

6.2 The Current Institutional Framework for SADC

SADC is a Regional Economic body, which serves the SADC Member States at various levels. The Sustainable Blue Economy Strategy is well placed within the SADC Secretariat. However, SADC may have to establish the SADC Blue Economy Centres of Excellence in strategic fronts. These will take care of the entire implementation of the SADC Sustainable Blue Economy Strategy. The Blue Economy strategy is influenced various level by other tools such as the MSP (which is covered in this report), ICZM and MDA (is covered in separate reports. The desired attributes of the SADC Sustainable Blue Economy, with the inclusive tools such as the MSP, ICZM and MDA. This can be implemented at regional level or at country level. MSP should form a basis for the implementation of the Blue Economy. Without MSP it is difficult to navigate the threats and opportunities of the Blue Economy. Without an MSP plan it is like someone planning to fail, thus is imperative to have the Ocean space adequately planned and delimited into the multi-stakeholder users.

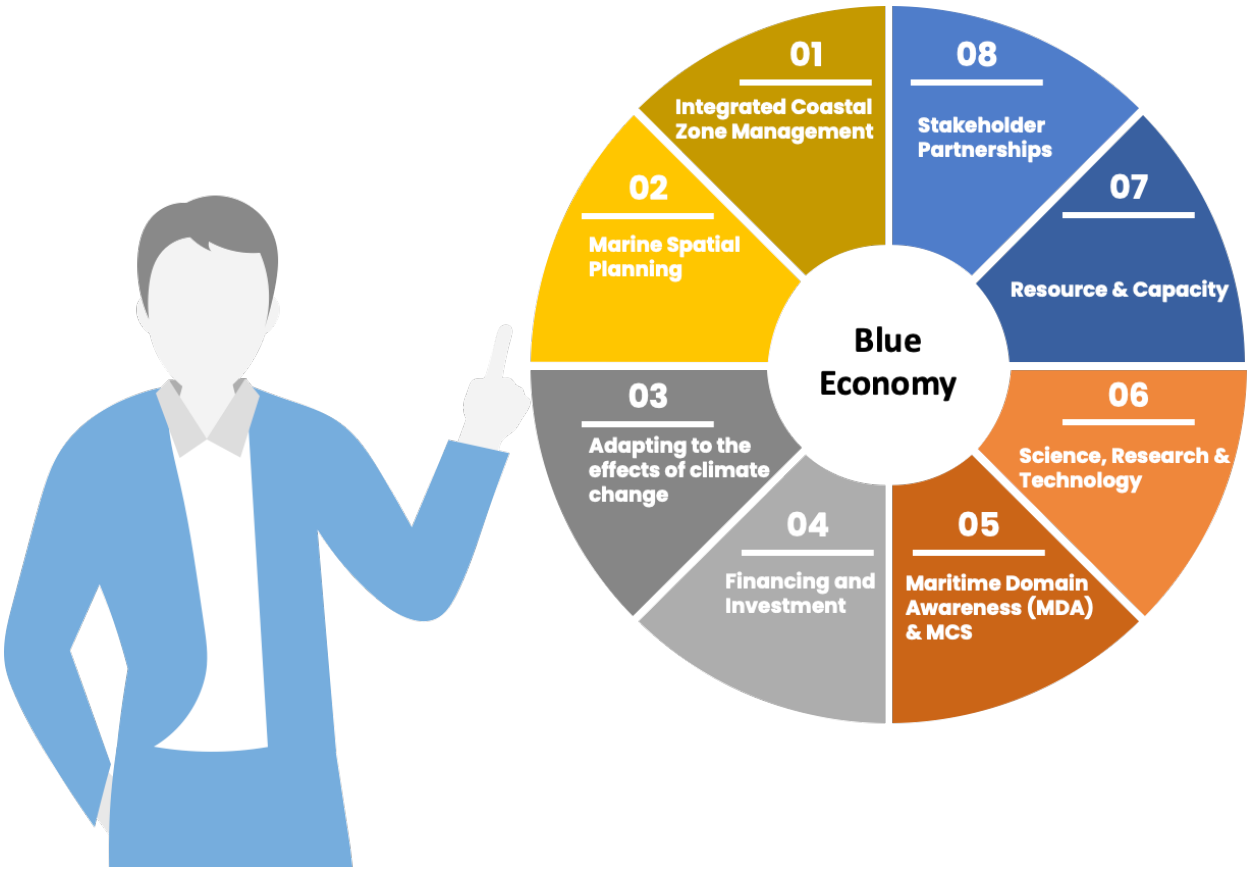


Figure 20: Showing the desired Sustainable Blue Economy with the three tools incorporated (MSP, ICZM, and MDA).

6.3 MSP inclusion in the Sustainable Blue Economy.

A Ste-by Step Workflow for the for the sustainable Blue Economy is shown in Figures 3 and 21. The step – by – step guide is made to assist Coastal and Small Island States to implement and incorporate MSP in Blue Economy as a tool, amongst other tools such as the Integrated Coastal Zone Management (IZCM) and Maritime Domain Awareness (MDA). As adopted from Global MSP, it has assisted a lot of countries to develop and implement MSP.

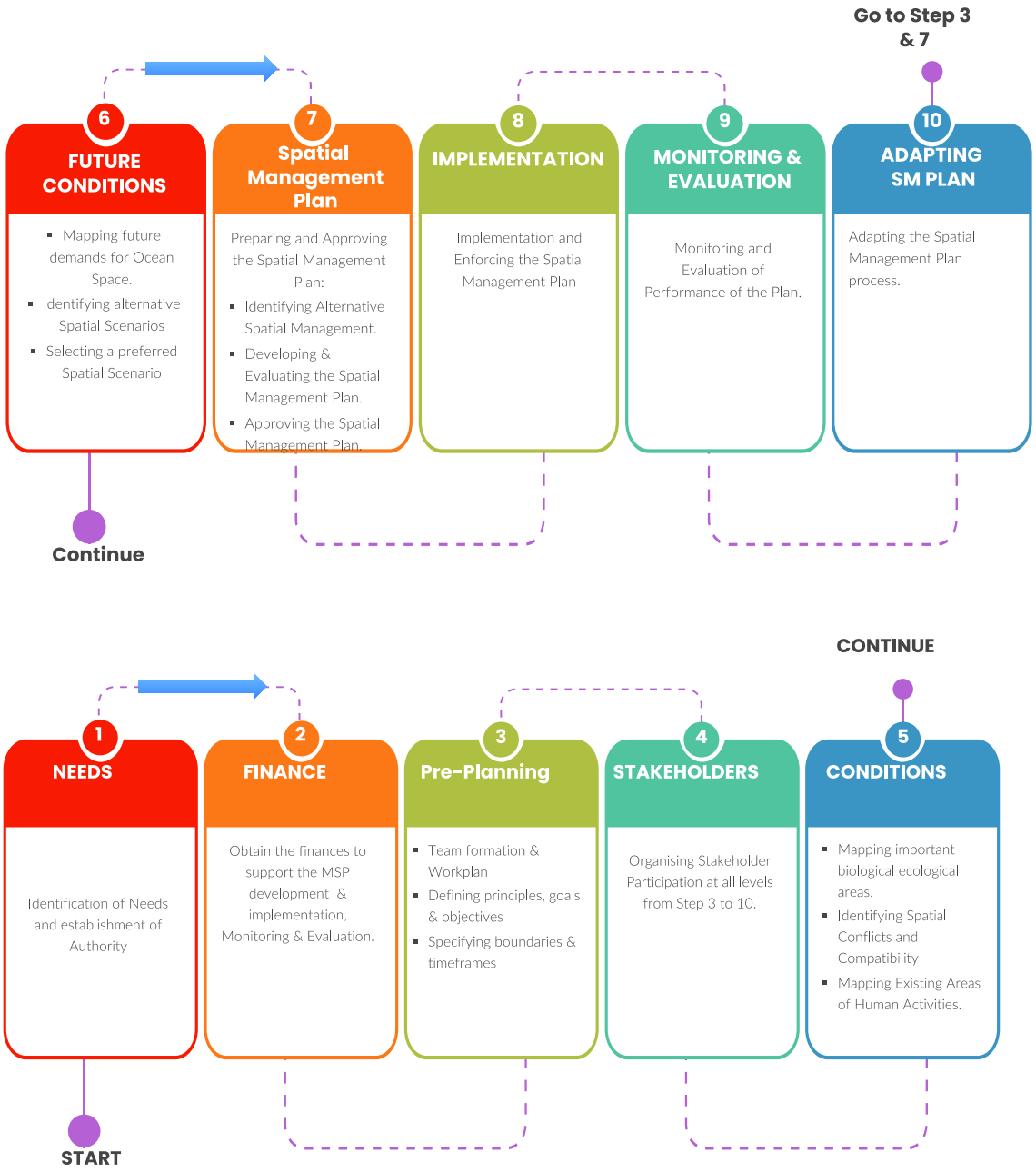


Figure 21: Step – by – Step Guide for the MSP process.

Marine Spatial Planning (MSP) is a process used to manage and allocate the use of marine resources in an integrated and sustainable way. These are the simple steps involved in the MSP development in the bigger scope of the sustainable Blue Economy:

» **Initiation:** The MSP process begins with the identification of the need for a plan. This could be due to a new development project, changes in marine resource use, or new regulations or policies.

» **Preparatory stage:** The preparatory stage involves establishing the objectives of the plan and identifying the stakeholders and their interests. It also involves data gathering and analysis, including physical, biological, social, and economic data. This information is used to create a baseline understanding of the marine environment and the impacts of human activities on it.

» **Visioning and goal-setting:** In this stage, stakeholders work together to establish a shared vision for the future of the marine environment, based on the information gathered in the previous stage. Goals and objectives are then set to achieve the vision.

» **Spatial analysis and mapping:** This stage involves analyzing the spatial distribution of marine resources, uses, and environmental characteristics. It includes the identification of areas of high ecological or cultural significance, areas of conflicting uses, and areas of potential for development.

» **Scenario development:** In this stage, stakeholders work together to develop alternative scenarios for the allocation of marine resources and uses. These scenarios are evaluated based on their ability to achieve the vision and goals set in the previous stage.

» **Option selection:** The preferred scenario is selected based on stakeholder input and evaluation. The selected scenario is then used to develop a spatial plan.

» **Implementation:** The plan is implemented through a combination of regulations, incentives, and management measures. This may include zoning, licensing, monitoring, and enforcement.

» **Monitoring and evaluation:** The effectiveness of the plan is monitored over time, and adjustments are made as needed. This stage involves ongoing engagement with stakeholders to ensure the plan remains relevant and effective.

» **Adaptive management:** Finally, the MSP process involves ongoing adaptive management, which involves adjusting the plan and its implementation as new information becomes available, and as conditions change over time.

6.4 The Creation of an Institutional Mechanism for Effective Marine Spatial Planning

Marine spatial planning (MSP) is purported as a process that helps to organize and manage the use of marine resources to achieve sustainable economic, social, and environmental outcomes. With MSP, it involves the allocation and management of activities in the marine environment in a way that minimizes conflicts and ensures the protection and conservation of marine ecosystems. To create an effective institutional mechanism for MSP, several key steps must be taken (Figure 22).

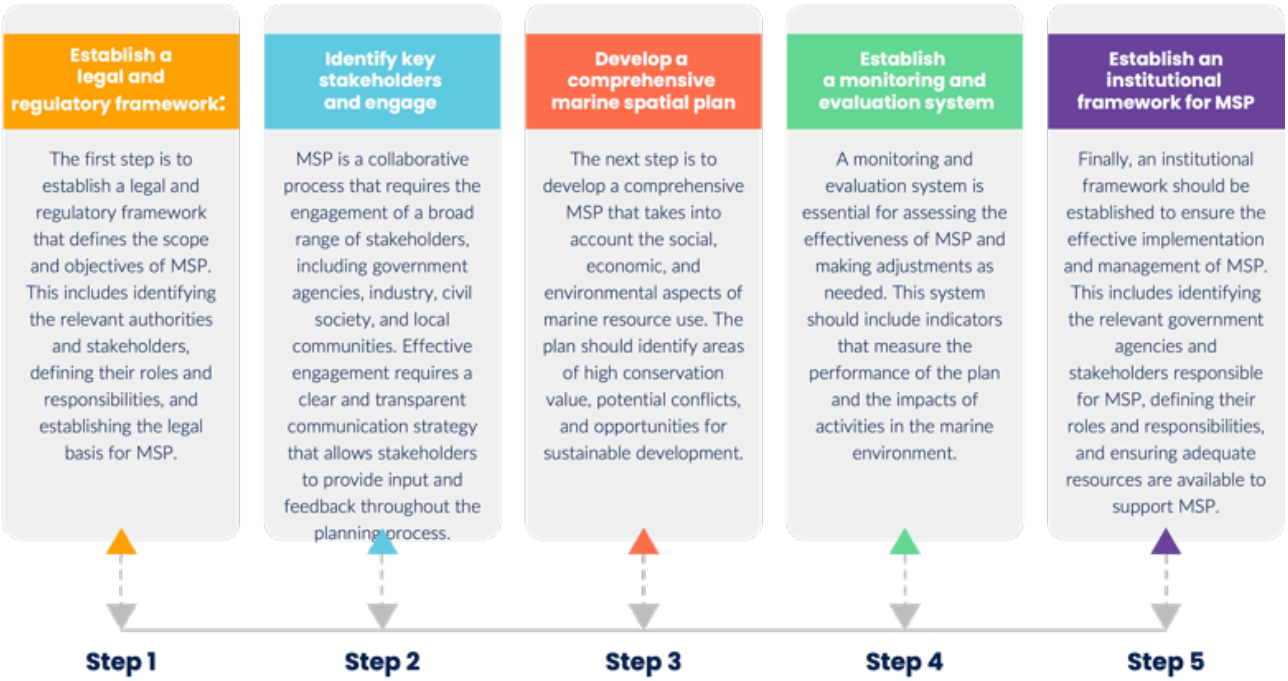


Figure 22: Steps to creating an effective institutional mechanism for MSP.

In summary, the creation of an institutional mechanism for effective MSP requires a clear legal and regulatory framework, the engagement of key stakeholders, the development of a comprehensive MSP, the establishment of a monitoring and evaluation system, and an institutional framework to support implementation and management

6.5 Capacity Needed for MSP in SADC

Arguably, Marine spatial planning (MSP) is a complex and interdisciplinary process that requires a significant amount of capacity-building in various areas. The Southern African Development Community (SADC) region is characterized by its rich marine biodiversity, which supports a variety of economic activities such as fishing, oil and gas exploration, and tourism. Effective MSP in the region can help to ensure sustainable use of these resources and reduce conflicts among different stakeholders (Figure 23).

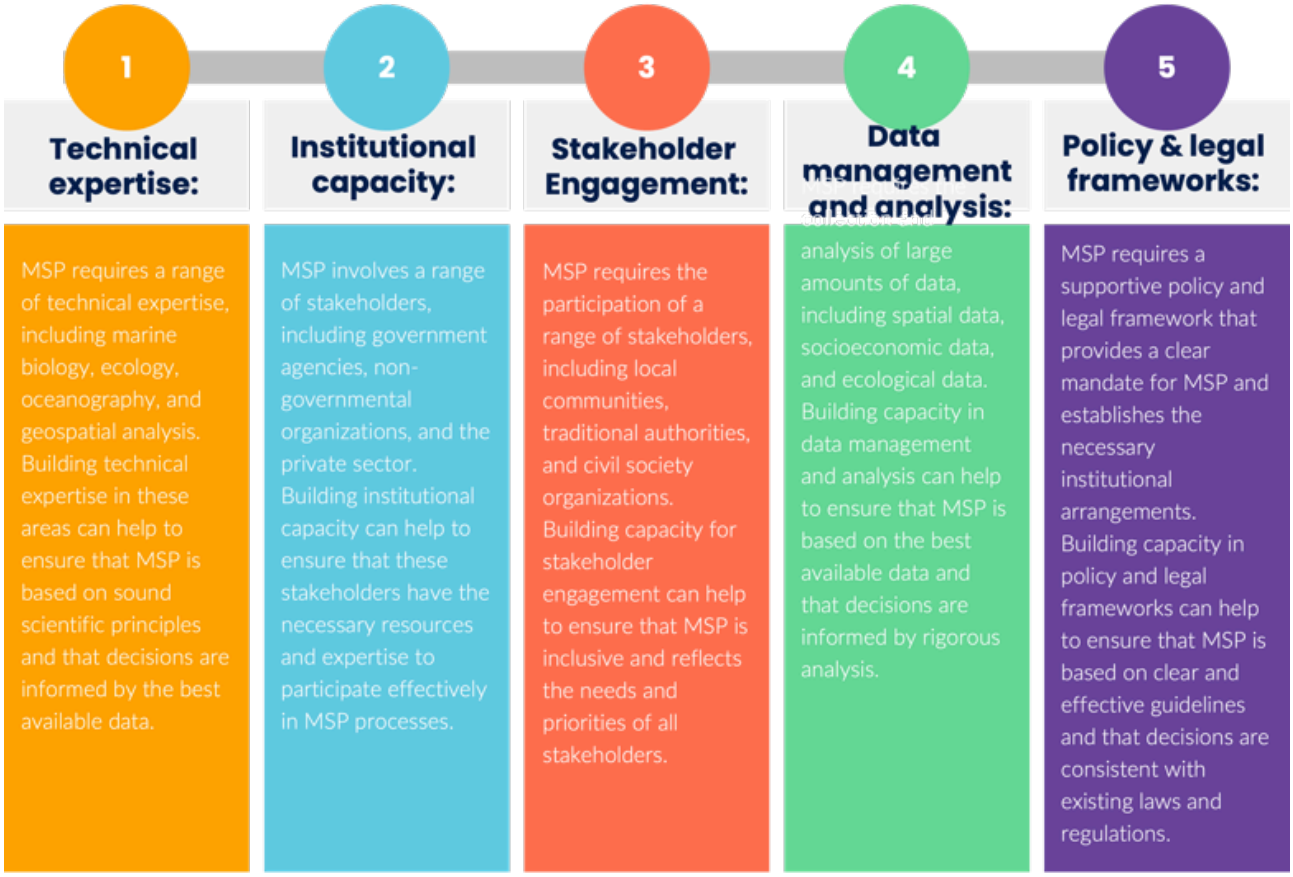


Figure 23: The capacity needed for MSP in SADC.

Therefore, building capacity for MSP in SADC is a long-term process that requires sustained investment in various areas. Effective MSP can help to ensure the sustainable use of marine resources, reduce conflicts among stakeholders, and promote economic development in the region.

6.5 How to use the MSP in the Implementation of the Blue Economy

Marine spatial planning (MSP) is a process that aims to balance competing uses of the ocean and manage ocean resources in a sustainable and integrated manner. The blue economy is a concept that refers to the sustainable use of ocean resources for economic growth, improved livelihoods, and job creation while maintaining the health of the ocean ecosystem (Figure 24).

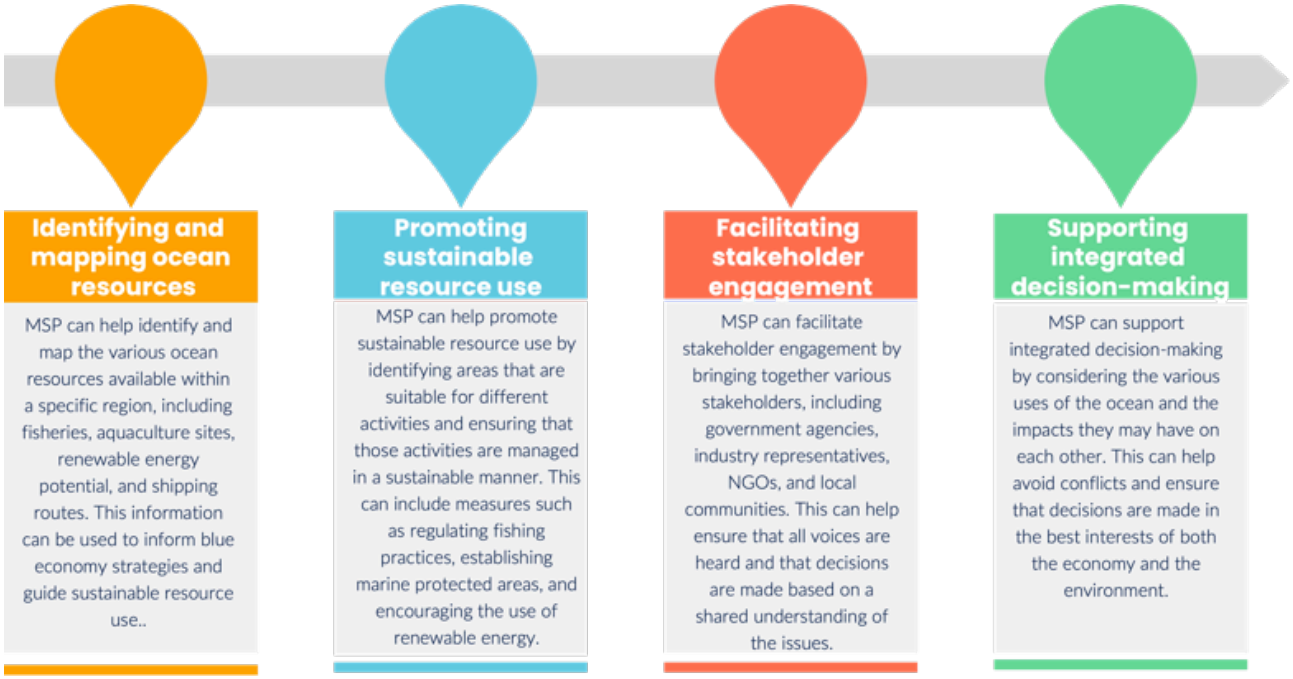


Figure 24: Inputs of MSP as a tool to implement the blue economy.

Furthermore, MSP can be a powerful tool in implementing the blue economy by promoting sustainable resource use, facilitating stakeholder engagement, and supporting integrated decision-making. By balancing economic growth with environmental protection, MSP can help ensure that the ocean's resources are used in a way that benefits both current and future generations.

CHAPTER 7: Recommendations and Conclusions

7.1 Recommendation

Marine Spatial Planning (MSP) is an important tool for supporting sustainable development in the Blue Economy. The Southern African Development Community (SADC) region is rich in marine resources, but also faces significant challenges in terms of overexploitation, pollution, and climate change. MSP can help to address these challenges by providing a framework for coordinating the use of marine space and resources in a way that is environmentally sustainable, socially equitable, and economically viable.

Here are some recommendations for using MSP in the SADC region:

Develop a comprehensive understanding of the marine environment - Before MSP can be effectively implemented, it is important to have a thorough understanding of the marine environment in the SADC region, including the distribution and abundance of marine resources, the ecological processes that govern them, and the human activities that affect them.

Engage stakeholders in the MSP process - MSP should be a collaborative and participatory process that involves all stakeholders, including government agencies, local communities, and the private sector. This can help to ensure that MSP is grounded in local knowledge and needs, and that it is supported by all relevant actors.

Identify and prioritize key areas for MSP - Based on the information gathered in step 1, it is important to identify and prioritize key areas for MSP, such as areas of high biodiversity or areas that are particularly vulnerable to human activities. These areas can then be designated for specific uses or activities, and managed accordingly.

Develop a comprehensive MSP plan - Once key areas have been identified, a comprehensive MSP plan should be developed that outlines the various uses and activities that are allowed in each area, as well as the regulations, monitoring, and enforcement mechanisms that will be put in place to ensure compliance.

Implement and monitor the MSP plan - Implementation of the MSP plan should be accompanied by ongoing monitoring and evaluation to ensure that it is achieving its objectives, and to identify any necessary modifications or adjustments.

By following these recommendations, the SADC region can use MSP as a tool to support sustainable development in the Blue Economy, and to ensure that the marine resources of the region are used in a way that is socially, economically, and environmentally sustainable.

7.2 Conclusions

Marine Spatial Planning (MSP) is a critical tool for managing the use of the ocean and coastal resources in the Southern African Development Community (SADC) region. MSP involves a comprehensive and integrated approach to planning, which takes into account environmental, social, economic, and cultural factors.

The implementation of MSP in the SADC region has the potential to provide numerous benefits, including improved marine and coastal ecosystem health, enhanced economic development opportunities, and strengthened social and cultural values. MSP can also help to address conflicts between different ocean and coastal uses, such as fishing, shipping, and energy production.

However, the successful implementation of MSP in the SADC region requires the involvement of all stakeholders, including governments, communities, industry, and civil society. This requires a collaborative and participatory approach to planning, where stakeholders work together to identify their respective interests and develop solutions that balance the different needs and priorities.

In conclusion, the adoption of MSP in the SADC region has the potential to support sustainable ocean and coastal development, and ensure the long-term health and well-being of the region's marine ecosystems and communities. However, its successful implementation requires a coordinated and inclusive approach that involves all stakeholders and addresses the complex challenges of balancing economic development with environmental and social sustainability.

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