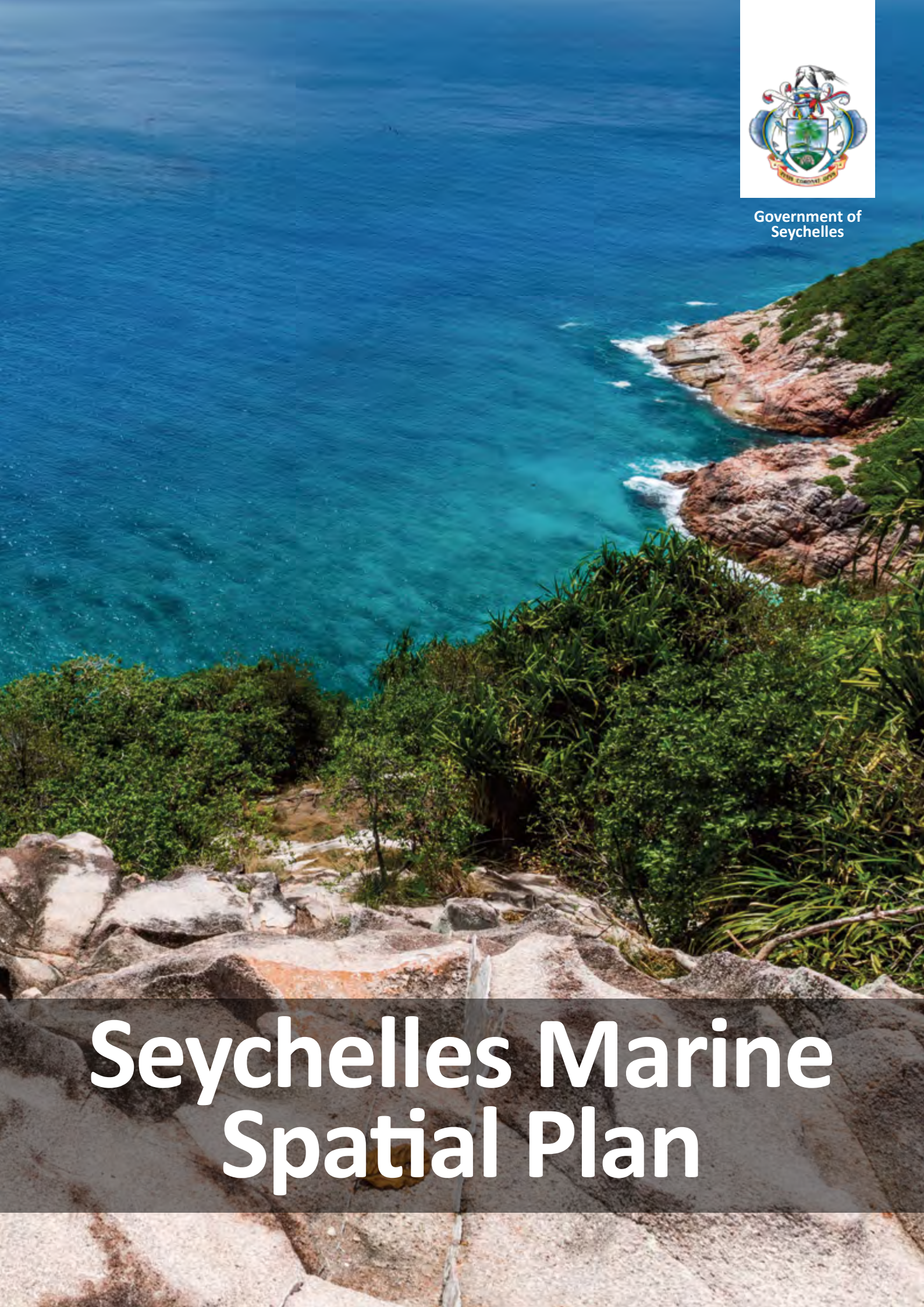

Government of Seychelles

Seychelles Marine Spatial Plan

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For more information or a copy of the Plan, contact:
Seychelles Marine Spatial Plan
Ministry of Agriculture, Climate Change and Environment
MSP Unit
Mahé, Seychelles

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SMSP
SEYCHELLES MARINE SPATIAL PLAN

The Nature Conservancy

SEYCHELLES CONSERVATION AND CLIMATE ADAPTATION TRUST
SeyCCAT

gef

UNDP

FOREWORD

The majority of the Protected Areas (PA) in Seychelles were established in the 1970s to protect Seychelles' unique biodiversity where it was most vulnerable and/or abundant. Today, conservation in Seychelles and around the world remains the cornerstone of many national policies. Seychelles has been at the forefront of worldwide conservation initiatives for a long time–Ste Anne Marine National Park was the first marine protected area to be designated in the Southwest Indian Ocean in 1973. By 2014 there were 25 protected or conserved areas in Seychelles covering more than 550 square kilometres of land and ocean.

In the year 2010, the Seychelles' President made a commitment to declare over 50% of Seychelles' terrestrial area and 30% of the ocean under biodiversity conservation. Efforts started in 2011 for the Seychelles marine goal–more than 410,000 square kilometres–and by 2020 Seychelles had reached 32.6% through the Seychelles Marine Spatial Plan (SMSP) initiative, a process facilitated by The Nature Conservancy (TNC) and supported by Seychelles Conservation and Climate Adaptation Trust (SeyCCAT). Seychelles has met and exceeded the national goal and international 30% target that was set by the Kunming-Montreal Global Biodiversity Framework in 2022.

The SMSP Initiative (2014–2025) was an integrated, multi-sector approach to marine conservation and sustainable management, address climate change adaptation, and support the Blue Economy and other national strategies. Participation in the SMSP came from all major sectors of the Seychelles including commercial fishing, tourism and marine charters, biodiversity conservation, renewable energy, port authority, maritime safety, non-renewable resources and civil society to develop a comprehensive marine plan with stakeholder inputs.

As co-Chairs of the SMSP Executive Committee, we have actively championed the advancement and completion of the SMSP across the Exclusive Economic Zone and Territorial Sea. This work reflects not only Seychelles' enduring commitment to biodiversity conservation and the sustainable use of our ocean resources, but also our belief in the long-term benefits this process will yield for our country. We are proud to have bridged efforts from the previous administration and maintained momentum on this critical national initiative. The SMSP stands as the most comprehensive and inclusive marine planning process in our history—one that positions Seychelles as a global leader in ocean governance and sets the foundation for a sustainable blue future.

The ocean space in Seychelles has a wide range of priorities and is managed by government with support from many different partners. With limited resources and Seychelles' geographical isolation from global centres of excellence, it is imperative that such diverse government and non-government partners in Seychelles work in collaboration to augment their individual capacities, knowledge and skills in the planning, conservation, and management of the ocean.

The past approaches to biodiversity management and conservation in the Seychelles have been fragmented. The SMSP provides an integrated process, designed to be inclusive and transparent. This is the first legally enforceable MSP in the Western Indian Ocean, and it is significant for improving ocean management for the Seychelles and the region. The Seychelles Marine Spatial Plan area is the second largest in the world and is a significant achievement for any country including a Large Ocean State.

Ministry of Agriculture, Climate Change and Environment
Ministry of Fisheries and Blue Economy

ACKNOWLEDGEMENTS

The Ministry of Agriculture, Climate Change and Environment (MACCE) and Ministry of Fisheries and Blue Economy (MFBE) would like to thank the Seychelles Marine Spatial Plan (SMSP) Committee members, stakeholders, civil society, SMSP Core Team, Seychelles Conservation and Climate Adaptation Trust, The Nature Conservancy, international experts, consultants, and funders for their help and assistance in the Seychelles Marine Spatial Plan Initiative.

Participation list of stakeholders is in an Annex.

SMSP Core Team: Joanna Smith, Ph.D.; Helena Sims, and Rick Tingey

Core Team Coordinators 2014–2025: Iris Carolus (2014–2015); Elke Talma (2020–2024); and Adrian Monthy (2024–2025)

PLAN PRODUCTION

Authors: Joanna Smith (The Nature Conservancy), Helena Sims (The Nature Conservancy), and Rick Tingey (Spatial Support Systems)

Coordination: Joanna Smith (The Nature Conservancy), Helena Sims (The Nature Conservancy), Adrian Monty (SeyCCAT), Rodney Quatre (MACCE), John Nevill (MSP Unit), Kate Longley-Wood (The Nature Conservancy), Marie-May Jeremie and Vania Robert (SeyCCAT).

Map preparation: Rick Tingey (Spatial Support Systems LLC), Joanna Smith (The Nature Conservancy), Helena Sims (The Nature Conservancy)

Plan design: Anne Francis (Anne Francis Web Design)

Copy editor: Sarah Ann Thompson

EXECUTIVE SUMMARY

The Seychelles Marine Spatial Plan (SMSP) is the result of a decade of inclusive and participatory planning to complete Seychelles' first comprehensive marine plan for marine protections, climate change adaptation, and a sustainable Blue Economy. The overall goal of the government-led spatial planning initiative was to develop and implement an integrated marine plan to optimise the sustainable use and effective management of the Seychelles marine environment while ensuring the social, cultural, and economic well-being of its people.

Seychelles' ocean is extremely important for the national economy and the cultural values of its people, while being a regionally significant hub for tuna fisheries and a globally important destination for nature-based tourism. The SMSP spans all waters in Seychelles from the mean high-water mark to the boundary of the Exclusive Economic Zone.

The SMSP was an evidence-based process that was informed by more than 100 spatial data layers, scientific publications, government and other reports, and local knowledge. The process used global best practices and international guidebooks to achieve the three main objectives: (i) increase marine protection to 30% of the ocean, (ii) address climate change adaptation, and (iii) support the Blue Economy agenda.

From 2014–2025, the SMSP held a total of 324 meetings and consultations with 389 invited participants in Seychelles, with most participation in-person in the country except some virtual meetings during the COVID-19 pandemic. The zoning design was completed from 2014–2019 and zoning to implementation followed from 2020–2025. In the first five years, more than 20 consultancies supported the SMSP for the zoning design process. Consultants provided expertise in fisheries, socio-economic analyses, finance, ecosystem services, protected areas, policy and legislation, communications, and spatial analyses. From zoning to implementation, the consultancies expanded to more than 60 to address the many complex facets of implementation of an MSP for 441,456 km^2 in marine protections and 1.35 million km^2 in improved ocean management across more than 12 marine sectors.

The SMSP was supported by significant technical, financial, and other contributions directly and in kind from the Government of Seychelles, The Nature Conservancy (TNC), Seychelles Conservation and Climate Adaptation Trust (SeyCCAT), Government of Seychelles – United Nations Development Programme Global Environment Facility (GoS-UNDP-GEF), World Bank SWIOFish3 Programme, Oceans5, Lyda Hill, Blue Nature Alliance, Waitt Institute, The Pew Charitable Trusts, and others.

The comprehensive SMSP was signed into law on 31st March 2025 and the Plan document contains 26 full-page maps, 19 tables with facts and information, and 11 figures that capture the governance structure, decision-making framework, and other SMSP process design elements. The spatial and non-spatial data will carry forward to implementation and are intended to be used by government agencies and stakeholders to inform future discussions and abide by the Seychelles MSP regulations and other related legislation. The Plan and SMSP Atlas will be excellent resources for all Seychellois to increase understanding and awareness of Seychelles' ocean including species, habitats, and human activities.

Chapter 1 introduces MSP in a global context and the general process steps to undertake an MSP. This chapter provides a summary of the global best practices and international standards, which set the framework for the Seychelles MSP. The benefits and challenges of an MSP are presented as well as a selection of international policies that can be integrated into MSP.

A summary of the Seychelles debt conversion is contained in Chapter 1, with the SMSP being a necessary output of the world's first debt conversion for oceans. More details about the Seychelles debt conversion can be found with SeyCCAT.

Chapter 2 is the description of the SMSP Initiative and contains the legal authority to plan, vision, goals and objectives, SMART objectives, the planning boundary and map, and scale and scope of the process. This chapter contains the process outputs that were developed after the launch in 2014 such as the guiding principles, summary of the milestones, and phased approach to achieve the 30% marine protection goal.

This chapter contains the information for the stakeholder engagement process, governance structure, and the iterative decision-making process diagram. The stakeholder committees are detailed in this chapter as well as communications and the advice log to track comments. The SMSP planning tools are summarised in Chapter 2 and include the spatial data catalogue, compatibility matrix, participatory mapping, decision-support tools, an overview of the SMSP Atlas, climate change risk mapping, and Marxan analysis for biodiversity and fisheries prioritisation. The purpose of Chapter 2 is to set the stage for Chapter 3 and the zoning design. This chapter contains some of the technical analyses and more details are found in the Annexes.

Chapter 3 contains all the information for the SMSP zoning design, including the zoning methodology and framework that supported the development of zoning designs for the SMSP objectives and the outputs that are in the Nature Reserves and Conservation (Marine Spatial Planning) regulations (S.I. 18, 2025). The chapter also contains the Allowable Activities Tables, Code Table, General and Area-based Management Considerations, and rationale tables for the five Zone 1 areas and the eight Zone 2 areas which are designated as marine protection areas. Included also are maps for each of the 13 marine protection areas plus the two Zone 3 areas for multiple uses. The SMSP regulations define the allowable activities in each zone, which will be supported by area-based management plans and regulations for protected area categories.

In this chapter, there are summaries of key trade-offs that were made during the planning process to successfully achieve the three goals of the SMSP. The tables that summarise the biodiversity representation are also in Chapter 3. The steps to gazette marine protection areas in Seychelles are documented to assist with other efforts in Seychelles that may seek to gazette new boundaries under the Nature Reserves and Conservancy Act (NRCA).

The SMSP received a lot of inputs, comments, advice, recommendations, and concerns during the planning process. A summary of stakeholder advice is provided in an Annex, including summaries of representation, main themes, number of people invited, and number of people actively participating. A master list of meetings is also available in an Annex.

Chapter 4 is the implementation plan, and it contains a review of the SMSP Policy Action Plan. The implementation governance mechanism is described in this chapter and includes the best available information through June 2025. The implementation governance mechanism discussion was ongoing as of completion of the SMSP and the interim option for the Seychelles Ocean Agency was operationalised through the MSP Unit.

This chapter includes information regarding the status of MPA management plans, co-management agreements, and five approved management units. The management units are not new boundaries, and they are not gazetted. The purpose of a management unit is to create an administrative boundary for the geographical limits of co-managers. MPA management plans for the 13 marine protection areas are being formulated from the new MPA management plan templates overseen by government. The summaries of two costing and financing analyses are included as well as monitoring, control, and surveillance information.

Chapter 5 describes the information and general process to revise and adapt the Plan as well as research and monitoring priorities. Importantly, the SMSP implementation would be primarily focused on applied research and further details are provided in the SMSP Policy.

Chapter 6 documents the many lessons learned during the decade-long planning process from setting out the SMSP process design to adapting the planning during the COVID-19 pandemic in 2020–2021. Other themes in lessons learned include stakeholder engagement, communications, spatial data infrastructure, and moving from zoning to implementation.

Chapter 7 contains the list of abbreviations used throughout the Plan. It serves somewhat as a reference tool to read what was included in the SMSP process in terms of national and international priorities and commitments, entities and organisations, and terminology across social, cultural, economic, and environment sectors.

Chapter 8 is a list of the key references used during the planning process including to develop the more than 15 outputs and support more than 75 consultancies. A complete list of references is in an Annex.

Chapter 9 is a list of Annexes that contain additional information to document the SMSP process and archive information that is relevant for a long-term record to assist future discussions and decisions. The Annexes are listed in the Table of Contents and are available for reading or digital download from the SMSP website.

After ten years of dedicated effort, the Seychelles Marine Spatial Plan (SMSP) was officially signed into law on 31st of March 2025. The legally binding Plan covers the entire Exclusive Economic Zone (EEZ) of Seychelles, ensuring long-term protection of marine biodiversity while supporting sustainable use of ocean resources. The SMSP represents a decade of collaboration and reaffirms Seychelles' commitment to marine conservation and sustainable Blue Economy leadership. This achievement marks a significant milestone in the collective efforts to sustainably manage Seychelles' marine resources and protect its ocean for future generations. It would not have been possible without the valuable input from more than 380 stakeholders and civil society, their unwavering commitment, and their hard work throughout the process. The time and dedication have been instrumental in the achievement of this national milestone.

With this momentous step, Seychelles continues to lead the way in marine conservation, offering a real-time example of how the global 30x30 target can be achieved and a sustainable Blue Economy developed. As more conservation-minded nations move toward similar goals, Seychelles' experience will undoubtedly serve as a valuable blueprint for success.

> *"The Seychelles Marine Spatial Plan reflects the shared responsibility to protect the ocean that feeds us, defines us, and sustains our future. The plan is a commitment that our children and grandchildren will inherit healthy seas and the chance to thrive in harmony with nature. The ocean cradles our islands, carries our stories, and feeds our souls. With the plan signed into law, we honour our deep connection to the sea. It's a promise that the rhythm of the tides will always speak of a Seychelles that protects what it loves—for every child and for the future yet to come."*
>
> *Helena Sims, SMSP Project Manager*

> *"This is a significant achievement for the Seychelles government, with enormous support and dedication from the stakeholders and public in Seychelles and partners for more than a decade. The SMSP Core Team has been honoured to support Seychelles with this historic undertaking and celebrate achieving the first legally enforceable MSP in the country and in the region. Seychelles has been a pioneer in the international marine spatial planning community and will have valuable lessons to share with others for many years to come."*
>
> *Joanna Smith, Ph.D., SMSP Process and Science Lead*

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF MAPS

CHAPTER 1: Marine Spatial Planning in Seychelles

Global Context of MSP

Globally, marine spatial planning (MSP) was formally introduced as a concept almost twenty years ago, in 2006. Marine spatial planning takes its origins from, and integrates the concepts of, ecosystem-based management and environmental impact assessments to address sustainable uses of ocean resources.

Marine spatial planning is "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, usually specified through a political process" (UNESCO). Marine spatial planning is a practical, transparent, and participatory way to plan for the sustainable use of the marine space and to balance demands for development with the need to protect the environment. Marine spatial planning is a way of improving decision-making and delivering an ecosystem-based approach to managing human activities in the marine environment. It's important to take a long view with marine spatial planning and create a vision for the ocean—a vision for the future—and a comprehensive management plan to achieve that vision. Marine plans need to include implementation plans including financing and governance arrangements, enforcement and monitoring, on-going stakeholder participation, and management plans for zones.

Rationale for bringing marine spatial planning into ocean management was rapid growth in the marine economic sectors, shifting consumer demand for more food, energy, and trade, and an increasingly larger proportion of goods and services coming from the marine environment as space and resources became more limited on land. The concept of marine spatial planning is to seek, find, or strike a balance between economic development and sustaining the environment, and takes into accounts multiple values while considering trade-offs among alternate scenarios for the future.

Marine spatial plans (MSP) have now been completed in more than 40 countries, most of them in Europe and North America, and now including Africa, South America, and the Pacific Islands. Approved plans range from policy documents to legally enforceable regulatory plans and the length of time to develop these plans has spanned up to 10 years; it is difficult to determine when some processes started. Germany, Belgium, and Norway have already either started or completed a review process of their first plans, and in some cases introduced new plans (Norway) or undergone adaptations of the initial plan (Norway, Belgium).

The main concepts of marine spatial planning include:

- multiple objectives
- participatory and inclusive
- iterative and adaptive
- balances economic development and environmental conservation
- multi-sector zoning design, not single sector
- climate-smart plans

Marine resources are typically “common property resources” and open or free access can lead to excessive or overuse and resource depletion. Managing common property resources is complex because there may be multiple stakeholders involved in the use of the resource and the value placed on the resource can vary from monetary to intrinsic or spiritual. In contrast to managing or planning for private property or lands where there are one or few owners, managing common property resources requires a different approach.

PLANNING STEPS

Marine planning is an iterative process. Plans are developed, monitored, adapted, and revised over time as new information becomes available, data availability improves, and with changes in marine uses or activities. Marine spatial planning can be thought of as a series of inter-linked activities and iterative steps, where stakeholders are an integral component of its implementation success (Table 1).

Table 1. General steps for a marine spatial planning process (adapted from UNESCO).

1. Identify need and establish authority	6. Define and analyse future conditions
2. Obtain financial support	7. Prepare and approve a marine plan
3. Organise the planning process	8. Implement and enforce a marine plan
4. Organise stakeholder participation	9. Monitor and evaluate performance of a plan
5. Define and analyse existing conditions	10. Revise and adapt a marine plan

BEST PRACTICES OF MSP

The Seychelles Marine Spatial Plan (SMSP) Initiative followed global best practices for MSP and marine protected areas (MPAs) using international guidebooks and guidelines from the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization (IOC-UNESCO), International Union for the Conservation of Nature (IUCN), and others.

The best practices of MSP include:

- Identify a vision and create a forward-looking plan
- Develop clear objectives and timelines
- Identify all stakeholders
- Develop an inclusive and participatory engagement approach
- Create adaptive systems and frameworks for decision making
- Identify relevant data needs and gaps, and match to objectives
- Assess social and economic impacts of the Plan
- Develop implementation plans including costing
- Identify and secure long-term sustainable financing
- Use an ecosystem-based approach
- Design plans that are feasible and implementable

BENEFITS AND CHALLENGES OF MSP

MSP offers benefits and challenges for sustainable ocean management by balancing ecological, economic, and social interests. The benefits include:

Environmental benefits:

- protects marine ecosystems through identification and designation of representative conservation areas and reduced habitat destruction
- reduces conflicts between activities (e.g., fishing, shipping, tourism) to minimize environmental impact
- promotes sustainable resource use by effectively managing extractive activities such as fisheries

Economic benefits:

- enhances economic opportunities by providing clear guidelines for maritime sectors
- reduces business risks by offering predictable regulations for investors
- improves efficiency in ocean space use, reducing operational costs for industries

Social benefits:

- balances stakeholder interests by integrating input from communities, businesses, and government agencies
- supports coastal communities by ensuring long-term access to marine resources
- enhances maritime safety by regulating traffic and reducing accidents at sea

Governance and planning benefits:

- improves decision-making with data-driven approaches for ocean use
- encourages cross-border cooperation in managing shared marine areas
- provides a long-term vision for ocean development, ensuring sustainability

By integrating these benefits, MSP helps create a more resilient and productive marine environment while supporting economic growth and community well-being. However, MSP is a complex process that involves managing ocean spaces for multiple uses while balancing environmental, economic, and social interests. The challenges include:

Conflicting interests:

- different sectors compete for the same space, leading to conflicts (e.g., fisheries, tourism, shipping, conservation, offshore energy)
- stakeholder engagement is often difficult due to varying priorities and levels of influence

Uncertainty:

- data gaps that can't be filled during the time frame or with available resources
- limited or outdated data on marine ecosystems, biodiversity, and human activities can hinder decision-making
- climate change introduces uncertainties, making long-term planning more difficult

Legal and governance issues:

- overlapping jurisdictions between national, regional, and international regulations create governance challenges
- lack of clear legal frameworks can slow implementation

Environmental concerns:

- balancing economic activities with ecosystem protection is difficult, especially with increasing human pressures on marine environments
- climate change impacts (e.g., rising sea levels, ocean acidification) require adaptive strategies

Stakeholder participation and equity:

- ensuring all stakeholders, including local communities and Indigenous groups, have a voice can be challenging
- power imbalances may lead to decisions favoring commercial interests over small-scale users

Technical and financial constraints:

- developing and implementing an MSP requires significant resources, expertise, and technology
- many countries lack the financial capacity to conduct comprehensive planning

Cross-border coordination:

- marine ecosystems do not follow political boundaries, requiring international collaboration
- different countries may have conflicting policies and priorities

To overcome these challenges, MSP can incorporate ecosystem-based management, improve data sharing, enhance stakeholder collaboration, and use adaptive management strategies to respond to changing conditions.

INTERNATIONAL POLICY

At the time of the SMSP launch in 2014, the international policy commitment for global biodiversity was the Convention on Biological Diversity Aichi Targets from the Rio+20 conference, with a global goal for 10% protection of lands and waters by 2020. This and other national and international policy commitments by the Seychelles government have informed the development of the SMSP and the designation of new marine protection areas. The list of international policy commitments grew during the development of the MSP and included, but was not limited to:

- Convention on Biological Diversity (CBD) Aichi targets
- High Ambition Coalition (HAC)
- High Level Panel for Sustainable Ocean Economy (HLP)
- Kunming-Montreal Global Biodiversity Framework (KMGBF)
- Paris Agreement
- Port State Measures Agreement (PSMA)
- National Plan of Action (NPOA) – Sharks
- UN Framework Convention on Climate Change (UNFCCC)
- UN Sustainable Development Goals (UNSDG)

Context of MSP in Seychelles

The Republic of Seychelles is an archipelago of 115 islands within a rich tropical marine ecosystem in the Western Indian Ocean. The Exclusive Economic Zone (EEZ) and Territorial Sea is 1.35 million km^2, with a land area of only 455 km^2. The island ecosystems have high rates of species endemism and their global importance for biodiversity is highlighted by two UNESCO World Heritage Sites (see Aldabra Atoll UNESCO World Heritage Site on Figure 1). Tourism and fisheries are vitally important to the economy, and Seychelles is a valuable partner in global trade through shipping and port facilities. Like other island nations, Seychelles is concerned about the effects that increased storm frequency and rising sea levels may have on coastal areas. In addition, coral bleaching from warm ocean temperatures threatens the beautiful coral reefs that provide valuable ecosystem services for people and ecological function for hundreds of marine species. The Blue Economy is an important mechanism for this Small Island Developing State to support its sustainable development goals and address climate change adaptation and ocean management. In 2012, Seychelles committed to a goal of up to 30% marine protection in its EEZ and the development of a comprehensive marine spatial plan to i) ensure representative species and habitats have long-term protection, ii) improve resiliency of coastal ecosystems with a changing climate, and iii) ensure economic opportunities for fisheries, tourism, and other uses. The extent of MPAs in 2012 was 0.04% of the EEZ, or about 454 km^2.

The Seychelles EEZ is among the top 25 largest in the world and is a global biodiversity hotspot with two UNESCO World Heritage Sites, Aldabra Atoll and Vallée de Mai. Biodiversity is one of the country's most important assets and it supports several major economic sectors, including fisheries and tourism. Geological studies indicate that there may be valuable petroleum reservoirs in Seychelles and renewable energy potentials exist near the coast and offshore. Marine and coastal biodiversity has been fundamental to the socio-economic development of Seychelles since the late 18th century when the island was first populated. Tourism and fisheries are the two main pillars of the economy and as far back as 1969, the Government of Seychelles (GoS) recognises through the Tourism policy of 1969 that "the attractions that tourists will seek, and above all to protect the natural beauty of these islands, which from all points of view, including tourism, is probably our greatest asset".

Today, Seychelles is a global destination for tourism and fishing. It is among the top premier saltwater fly fishing and sport fishing destinations in the world and the iconic beaches and breath-taking remote islands make it highly desired for destination weddings and lifetime bucket lists. The oceans surrounding Seychelles support both locally and foreign-owned fishing vessels that contribute significant amounts to the local economy and livelihoods, partnerships with the EU and other nations, and at 1.35 million km^2, pose a challenge for management, monitoring, and surveillance. Since the 1960s, the government of Seychelles has taken important steps to conserve and manage its land area and more than 60% of terrestrial habitats are designated in protected areas including national parks and nature reserves. In the ocean, ten areas were legally designated for biodiversity protection as of 2014 primarily in shallow waters, near islands, and not fully

representative of all the marine habitats and species that occur in Seychelles. They cover less than 1% of the ocean under Seychelles jurisdiction, do not address current conflicts among uses, and multiple threats to the ocean ecosystem were not being addressed. With a high level of endemism at 50–85% for different animal groups and 45% for plants, it is unsurprising that Seychelles has a long history of conservation measures and management initiatives dating back to the late 1770s with the decrees of De Malavois and initiatives to establish reserves for giant tortoises in the late 1780s. However, area-based legislation was only developed in the 1960s, including the National Parks and Nature Conservancy Ordinance of 1969 (Annex I). These were put into context through a government white paper by Mr. John Procter in 1971 entitled "Conservation Policy in the Seychelles". This paper accompanied the development of the Seychelles Tourism Policy (1969) and the National Parks and Nature Conservancy Ordinance of 1969 and the Town and Country Planning Ordinance of 1970.

Unsurprisingly, environmental concerns are firmly entrenched in the Seychelles Constitution (1993), where Article 38 declares that "*The State recognises the right of every person to live in and enjoy a clean, healthy and ecologically balanced environment and with a view to ensuring the effective realisation of this right the State undertakes to – a) take measures to promote the protection, preservation, and improvement of the environment; b) to ensure a sustainable socio-economic development of Seychelles by a judicious use and management of the resources of Seychelles; and c) to promote public awareness of the need to protect, preserve, and improve the environment*".

Seychelles was the second country to sign the CBD in June 1992 and became a party to the Convention that same year. One of the CBD Aichi targets is that by the year 2020, at least 10% of coastal and marine areas are effectively conserved (Strategic Goal C, Target 11). Although Seychelles was one of the first countries in East Africa and the Western Indian Ocean (WIO) to establish a network of MPAs in the 1960s, the total area of MPAs in Seychelles remained less than 1% of the EEZ. Additionally, the selection criteria in that period of time were based primarily on aesthetic and hence tourism utility, not biodiversity values, and with limited stakeholder consultation.

SEYCHELLES DEBT CONVERSION

In June 2012 at the Rio+20 conference, the Seychelles President made a commitment to declare a goal for over 50% of Seychelles' terrestrial surface area and 30% of the marine area under biodiversity conservation as a pledge conditional to raise funds for conservation and climate change adaptation. This goal would exceed the 10% target set by the CBD for the National Marine Territory.

From the national and international commitments made in 2012, the SMSP initiative was a necessary output of an award-winning government-led "Debt-for-Climate-Change-Adaptation swap", the negotiation of which was finalised in February 2016. This debt conversion was a significant, globally recognised innovation that held the Seychelles government accountable to delivering a marine spatial plan that resulted in more than 444,000 km^2 of new marine protections and 1.35 million km^2 of improved ocean management. A comprehensive MSP for all ocean waters was a significant commitment by the Seychelles government to analyse existing and future uses and activities and to allocate space for ecological, economic, and social objectives for the long-term conservation and protection of its oceans.

The Seychelles debt refinancing model for conservation has led or inspired eight more refinancing projects since 2016 in other countries: Belize, Barbados (2), Gabon, El Salvador, Ecuador (2), and The Bahamas, with more than USD $1.8 billion in financing available for conservation.

Seychelles MSP Timeline

2012
- Government 30% ocean protection commitment

2013
- Debt conversion discussions

2014
- SMSP Launched

2015
- SeyCCAT Act
- *National Election*

2016
- GoS-TNC-SeyCCAT Debt Conversion signed

2017
- SMSP planning continued
- Implementation steps launched

2018
- Milestone 1: 15%

2019
- Milestone 2: 26%
- Draft Marine Spatial Plan

2020
- Milestone 3: 32.6%
- SMSP Policy Signed
- *Global Pandemic*
- *National Election*

2021
- *Global Pandemic*
- Virtual consultations

2022
- Restart in-person consultations
- Implementation steps continued

2023
- Draft SMSP regulation
- Seychelles Ocean Agency MSP Unit

2024
- Draft Marine Spatial Plan
- Implementation steps continued

2025
- SMSP signed into law
- SMSP completed
- SMSP Implementation

CHAPTER 2: Seychelles MSP Initiative

Description of Seychelles MSP Initiative

The Seychelles Marine Spatial Plan (SMSP) Initiative was a process focused on planning for, and the management of, the sustainable and long-term use and health of the Seychelles ocean. The SMSP Initiative was a government-led process, with planning and facilitation by The Nature Conservancy (TNC) in partnership with GoS – United Nations Development Programme Global Environmental Facility (UNDP GEF) Programme Coordinating Unit, now named the Programme Development and Coordination Section. Funding for the Initiative was provided through a number of grants to Government of Seychelles and private awards to TNC. The SMSP guides the strategies and decisions of the Seychelles Conservation & Climate Adaptation Trust (SeyCCAT) established as part of the Debt-for-Climate-Change-Adaptation swap.

The SMSP process is an integrated, multi-sector approach and engaged with more than 12 marine sectors and civil society of Seychelles including fisheries, finance, tourism, conservation, financing, climate, renewable energy, port authority, shipping and transportation, maritime safety and security, research, recreation and non-renewable resources to develop a comprehensive marine plan with robust stakeholder input.

LEGAL AUTHORITY TO PLAN

Under the Constitution, the territory of Seychelles includes the islands of the Seychelles Archipelago, the territorial waters and historic waters of Seychelles and the seabed and subsoil underlying those waters, the airspace above those islands and waters, and such additional areas as may be declared by law to be part of the territory of Seychelles. At the legislative level, the Maritime Zones Act 1999, together with the orders and regulations made thereunder, set forth Seychelles' claims of sovereignty and sovereign rights with respect to the nation's marine waters. The Maritime Zones Act 1999 further provides that the "territory" of Seychelles includes the internal waters, archipelagic waters, and the territorial sea, and that the courts of Seychelles have jurisdiction over these areas (Article 2). Consistent with the UN Convention on the Law of the Sea (UNCLOS), Seychelles makes the following standard claims:

- a Territorial Sea extending to 12 nautical miles (nm) from baselines
- an Exclusive Economic Zone (EEZ) extending to 200 nm from baselines (including a contiguous zone located between 12 and 24 nm from baselines) (SMSP Legal Considerations and Roadmap 2023)

Seychelles is an archipelagic state and is recognised for its archipelagic waters as defined by UNCLOS. The significance of archipelagic waters primarily relates to the baseline for measuring the EEZ boundary. Additionally, Seychelles has made claims for an extended continental shelf, pursuant to Article 76 of UNCLOS.

The Ministry of Environment, Energy and Climate Change (MEECC) was the lead authority to plan for the MSP and to implement the MSP. The name changed to the Ministry of Agriculture, Climate Change and Environment (MACCE) in 2020. The Seychelles protected areas and environmental legislations under the responsibility of MEECC/MACCE provided the legal instruments for the planning authority including the National Parks and Nature Conservancy (NPNC) Act, the key mechanism for designating and managing MPAs 2018-2020. The NPNCA was replaced by the Nature Reserves and Conservancy (NRC) Act 2022. The Environment Protection Act 2016 was another source of legal authority to plan for the EEZ and an interim measure for SMSP implementation.

A full legislative and policy review was done twice for the SMSP and two reports prepared: the "Seychelles Marine Spatial Planning Legislative and Policy Review" (2015) and "Towards Effective Implementaion of the Seychelles Marine Spatial Plan – Legal Considerations and Roadmap" (2023). All reports are available on the SMSP website.

INTEGRATION WITH OTHER INITIATIVES

The development of the Seychelles Marine Spatial Plan ("the Plan") was supported by and integrated different efforts in Seychelles that focused on improving ocean management for biodiversity, the Blue Economy, and climate change adaptation. Over the decade-long SMSP process these efforts included but were not limited to the following:

- GoS-UNDP-GEF "Strengthening Seychelles Protected Area system through NGO management modalities" project
- GoS-UNDP-GEF "Expansion and Strengthening of the Protected Area Subsystem of the Outer Islands of Seychelles and its Integration into the broader land and seascape" project
- Biodiversity Finance Initiative (BIOFIN) Project
- GoS-UNDP-GEF "Protected Areas Finance Project"
- Seychelles Debt-for-Climate-Change-Adaptation swap (debt conversion)
- Seychelles Conservation and Climate Adaptation Trust (SeyCCAT) – Blue Grant Fund projects
- Southwest Indian Ocean Fisheries 3 (SWIOFish3) Programme funded by the World Bank
- GoS-UNDP-GEF 7 "Prioritising Biodiversity Conservation and Nature-based Solutions as Pillars of Seychelles' Blue Economy" project
- Regional Adaptation Fund Coral Restoration Project
- Regional and national projects funded by a Blue Economy Western Indian Ocean grant
- Grants and in-kind support to SeyCCAT for activities such as:
    - Seychelles Marine Protected Area Network project
    - Enabling the Seychelles Marine Spatial Plan
    - Coastal Wetlands and Climate Change project
    - Legal Roadmap

VISION, GOALS AND OBJECTIVES

Clearly identifying goals and objectives is a cornerstone of marine spatial planning and aligns with global best practices for organising a planning process (IOC-UNESCO). Marine spatial planning is best achieved and most successful when conducted based on an "objective-based approach". Ideally goals and objectives will be derived from problems or issues in the marine area and will reflect a set of marine spatial planning principles. A SMART objective approach to MSP is organised around a hierarchy of goals, objectives, activities, and indicators that evaluate activities in achieving the goals and objectives.

The definitions associated with this hierarchy are:

Goal – a statement of general action or intent. Goals are high-level statements of the desired outcomes. Goals provide the umbrella for development of all other objectives and reflect the principles upon which subsequent objectives are based.

Objective – a statement of desired outcomes or observable behavioural changes that represent achievement of a goal.

SMART – an acronym to quantify objectives: Specific, Measurable, Achievable, Relevant, Time-bound.

The Seychelles Constitution and the guiding principles of the Seychelles Sustainable Development Strategy (SSDS) 2012–2020 provided the overall goal for the SMSP Initiative

Overall Goal: develop and implement an integrated marine plan to optimise the sustainable use and effective management of the Seychelles marine environment while ensuring and improving the social, cultural, and economic wellbeing of its people.

Vision mapping was undertaken, in alignment with MSP best practices, to guide the development of goals and objectives for a national MSP process. A 2-day workshop was held 4–5 February 2014 to introduce a year-long process called the Seychelles Marine Multi-use Adaptation Project (SeyMMAP) and define ecological, socio-economic, and cultural objectives. The workshop participants identified three high-level objectives for marine spatial planning in Seychelles:

1. Increase marine protected areas by 30%
2. Support the Blue Economy Agenda
3. Address climate change adaptation

From this workshop, an MSP process was launched on 14–15 May 2014. Over the course of meetings in 2014, the timeline of the process was lengthened to cover multiple years in order to meet the goals and use a science-based, inclusive, participatory process. The name of the process was changed to Seychelles Marine Spatial Plan Initiative (SMSP) and the objectives were approved by the Steering Committee in 2015:

The SMSP would develop a Marine Spatial Plan by 2020 that:

1. Legislates marine protections that are 30% of Seychelles' Exclusive Economic Zone and Territorial Sea.
2. Promotes the Blue Economy and other national strategies to support ocean health, local economy and economic growth.
3. Addresses climate change in coastal and offshore habitats.

SMART Objectives

The drafting of SMART objectives began in May 2014. The initial stakeholder workshops and group sessions identified more than ten SMART objectives (see the website for Workshop Report, 15 May 2014). The final version of the SMART objectives was approved by the SMSP Executive Committee on 29 July 2022. Activities and indicators were identified or developed for the SMART objectives in consultation with the government agencies, SMSP stakeholders, and local experts. The activities also support the implementation of the Seychelles MSP Policy (2020). Activities were designed so that the outputs would have alignment and synergies with other projects or programmes on similar topics in Seychelles; the source of some specific activities are noted (Annex).

The high-level objectives were called "goals" during the planning process to best guide the planning work. The SMART Objectives for the SMSP specified the the desired outcomes:

Goal 1: Increase Marine Protection Areas by 30%

SMART Objective*: Identify new MPAs for 30% of the Exclusive Economic Zone and Territorial Sea by 2020 by representation of species and habitats and by total area.*

Goal 2: Support the Blue Economy Agenda

SMART Objective: *Develop Allowable Activities Tables with sustainability criteria for SMSP Zones by 2022 to support the Blue Economy Agenda throughout the Seychelles coastal and marine environments.*

Goal 3: Address Climate Change Adaptation

SMART Objective: *By 2020, develop climate change risk mapping for coral reefs and coastal protection to better understand the most important climate risks in Seychelles, and better understand options for adaptation measures and feasibility of implementing them.*

PLANNING BOUNDARY

The SMSP planning boundary is the entire maritime area of 1,351,975 km^2 of the archipelagic waters, Territorial Sea, and EEZ (Table 2, Map 1). Most of the Seychelles ocean is the EEZ (95.9%), while only 3.3% is the Territorial Sea and less than 1% are the Archipelagic Waters. Most of the planning boundary (96.2%) are waters deeper than 200m, with less than 4% shallow waters from 0-200m.

In 2022, the EEZ boundary was re-mapped based on the new archipelagic baselines resulting in a slight increase of 200 km^2 or 0.01%. The Maritime Zones (Territorial Sea) Order 2022 (S.I. 80 of 2022), Maritime Zones (Baselines) Order 2022 (S.I. 81 of 2022), Maritime Zones (Contiguous Zone) Order 2022 (S.I. 82 of 2022), and Maritime Zones (Exclusive Economic Zone) Order 2022 (S.I. 83 of 2022) comprise the legal coordinates for the SMSP planning boundaries.

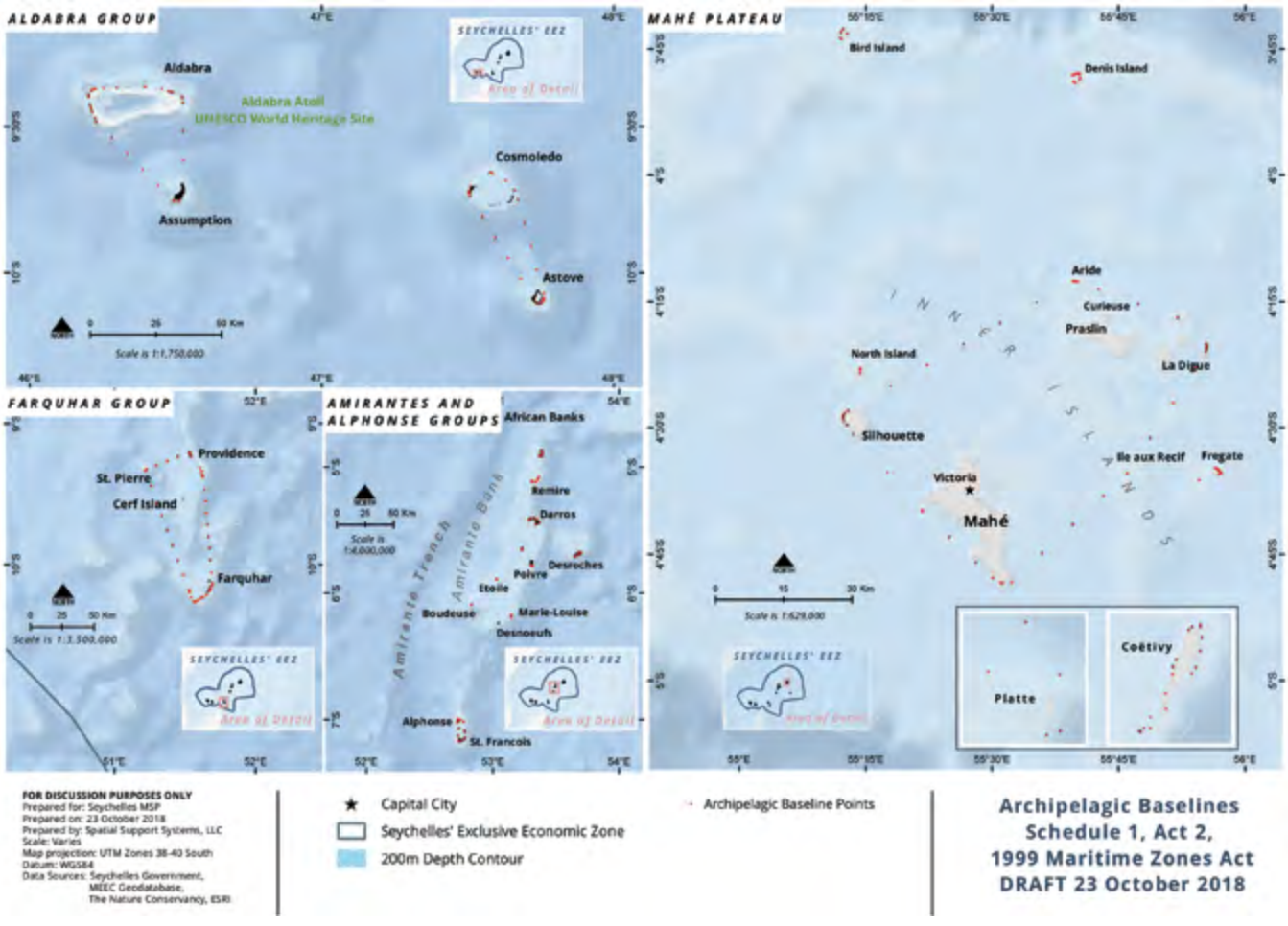
The planning boundary extends from the "mean high water" (MHW) mark on the coastline to the boundary of the Seychelles EEZ, as defined in relevant Seychelles legislation; the SMSP includes all marine waters and areas within this boundary. The SMSP planning boundary does not include brackish water or inlets on Mahé Island.

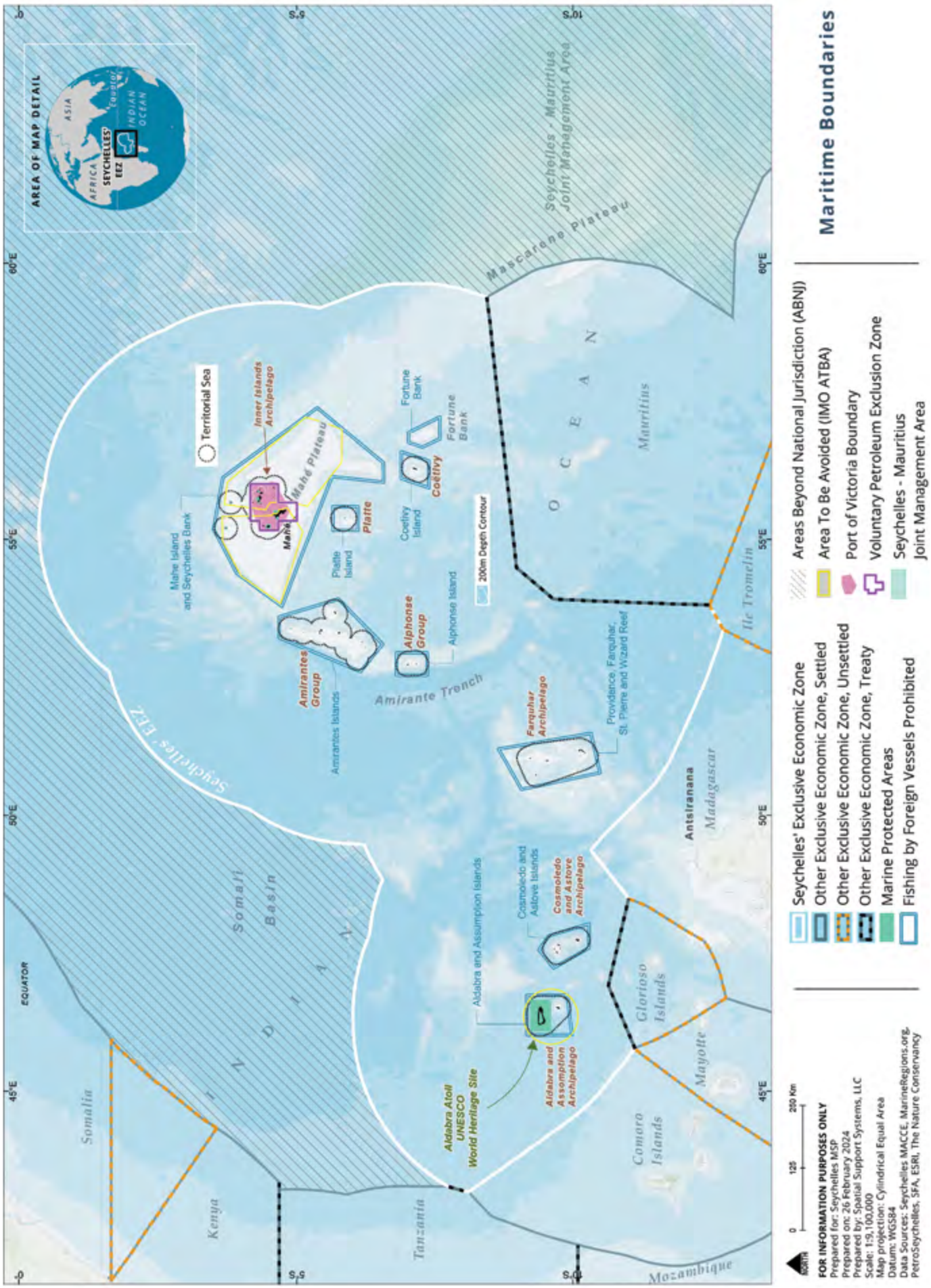
The planning boundary contains existing maritime zones, notably Seychelles Industrial Fisheries Exclusion Zones, Marine Protected Areas, and Port of Victoria. Additional marine zones that were demarcated on International Hydrographic Organisation nautical charts included the Areas To Be Avoided on Mahé Plateau and surrounding the Aldabra Atoll. In summary, all existing legally designated marine and maritime zones were identified and incorporated into the zoning design process and SMSP Atlas maps.

The planning boundary does not include the Joint Management Area (JMA) with Mauritius, any of the Extended Continental Shelf areas (ECS), or Areas Beyond National Jurisdiction (ABNJ).

Table 2. The maritime areas of Seychelles from the Archipelagic Waters to the Exclusive Economic Zone, with the area and percentage in shallow and deep waters.

Maritime Zone Areas	Area (km²)	Percent of all marine waters
All maritime areas	1,351,975	
Archipelagic Waters (coastline to baseline)	8,604	0.64%
Territorial Sea (baseline–12 nm)	45,264	3.3%
Exclusive Economic Zone (12–200 nm)	1,297,652	95.9%
Total shallow water (≤ 200 m)	50,628	3.7%
Total deep water (> 200 m)	1,301,147	96.2%





Map 1. The planning boundary and existing maritime boundaries in Seychelles for the inception of the process in 2014.

SCALE AND SCOPE

The United Nations Convention for the Law of the Sea (UNCLOS) clearly defines the rights of sovereign states and the rights that a nation can exercise in the different maritime zones (Figure 1). Within the planning boundary, the geographic scope extends vertically from the seabed (and below) to the surface of the ocean. While sovereignty includes the airspace above the ocean, this was out of scope for the SMSP, however, the consideration of activity in the air space and impact to marine life or activities within the MSP zones was within scope. An example is the consideration of no-fly zones above or near atolls where animals may be breeding.

Out of scope were land-based activities and sources of pollution. Nevertheless, to the extent that pollution and land-based activities affect the marine environment, they will be considered in the siting for new marine protections such that adverse effects from terrestrial activities do not compromise objectives for any new MPAs.

The Seychelles-Mauritius JMA and extended continental shelf areas in the North of the Seychelles EEZ were out of scope, however, the planning process considered the benefits and impacts of zoning and marine protections for biodiversity conservation within the EEZ boundary in relation to these areas, especially the JMA, and the implications for conservation and economic development in the future.

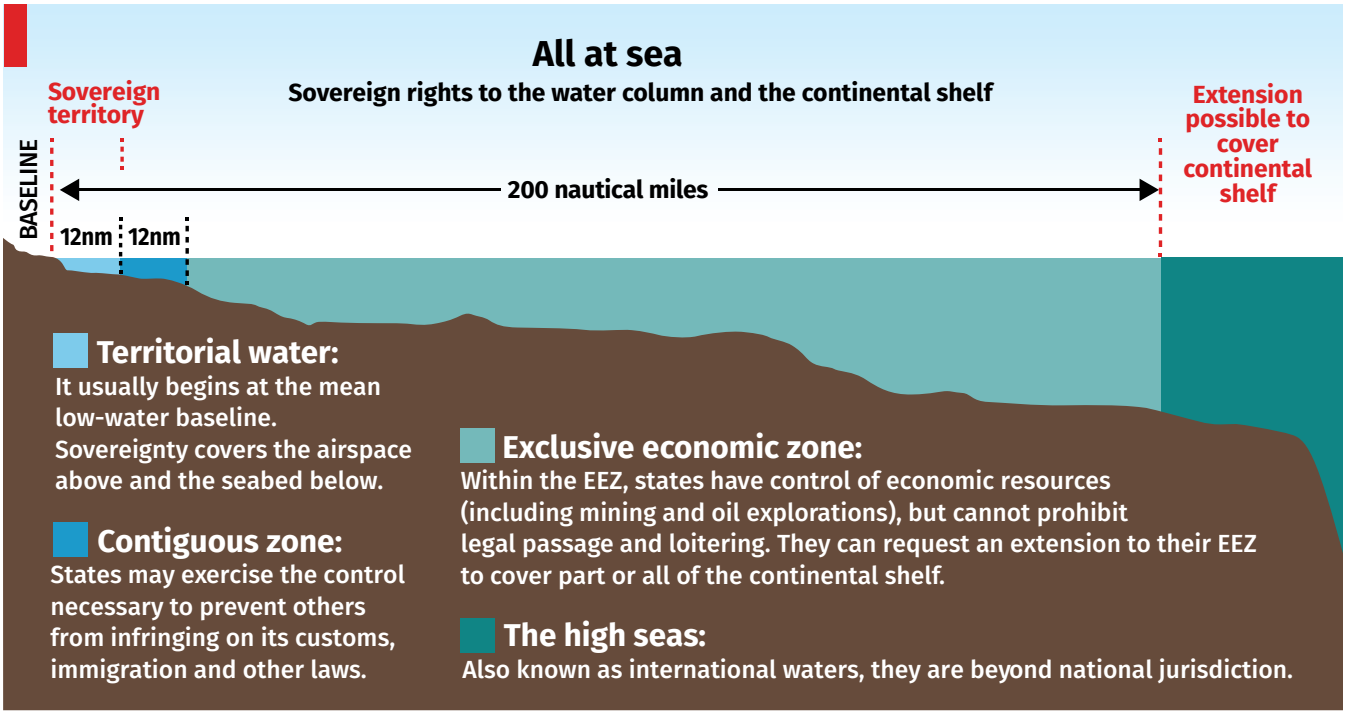


Figure 1. Maritime boundaries as defined by the UN Convention of the Law of the Sea, UNCLOS.

The geographic scale of analyses of data and information was defined at both coarse and fine scales with a planning unit approach for the entire planning boundary. The planning units were 1 km^2 in shallow waters less than or equal to 200 m depth and 50 km^2 in waters greater than 200 m depth. In GIS, hexagons rather than squares were used to account for the curvature of planning units over the earth's surface. The systematic planning unit approach for all spatial analyses attributed all data in the spatial data catalogue to the 1 km^2 or 50 km^2 "cells" in the planning boundary for shallow and deep habitats, respectively (Figure 2). The planning unit approach meant that data could updated and added during the SMSP process and spatial analyses conducted for the zoning designs to achieve the goals and objectives. This approach allowed for a high degree of flexibility throughout the planning process to develop zoning design proposals, map uses and activities, and analyse data and visualise trends.

- Analysis units were scaled for the Inner Islands and the Outer Islands.
- Analysis units were 1 km^2 in waters less than or equal to 200 m depth (shallow).
- Analysis units were 50 km^2 in waters greater than 200 m depth (deep).

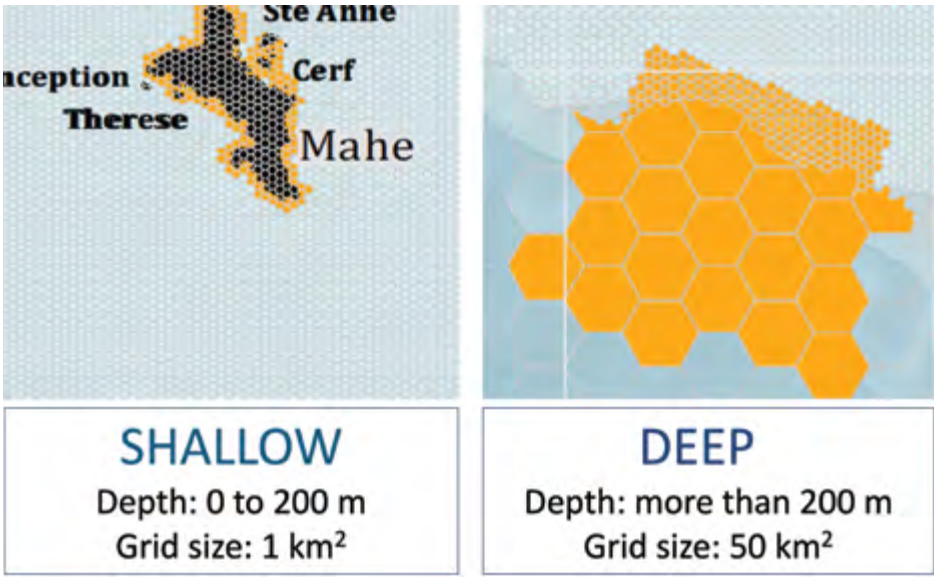


Figure 2. Shallow and deep-water planning units developed for the SMSP zoning approach in the spatial data catalogue to support the zoning designs and other spatial analyses and queries.

The scope of uses and activities included in the SMSP were discussed during the February and May 2014 stakeholder workshops and medium- and high-priority planning goals were identified. Planning focused on more than 12 key marine sectors in Seychelles, depending on how sectors were grouped or defined by stakeholders:

- Biodiversity Conservation
- Fisheries (domestic, subsistence, foreign, aquaculture)
- Marine Infrastructure
- Public Utilities
- National Security & Maritime Safety
- Marine Transportation and Shipping
- Non-renewable Resources
- Renewable Energy
- Tourism and Recreation (including sport fishing)

The goal-setting led to organising the SMSP into seven themes for planning and data analysis: fisheries, tourism, biodiversity, cultural heritage, petroleum, marine transportation, and renewable energy. During additional workshops in 2014, the number of themes was revised from seven to five and the SMSP spatial data catalogue was built around these five themes:

1. Fisheries
2. Biodiversity Conservation
3. Infrastructure and Public Utilities
4. Non-renewable Resources
5. Tourism and Recreation

Guiding Principles

The guiding principles of the SMSP Initiative laid the foundation of the planning process and determined the basic or essential qualities of the process and its outputs. The SMSP Initiative developed 'Guiding Principles' during stakeholder consultations in 2014–2015:

- Integration and coordination with all Laws, Regulations, Acts, Legal Agreements, National Policy, and Authorised Management Plans in Seychelles. Integration with national strategies, goals, and action plans. Integration with all marine stakeholders and consider co-management arrangements, where possible.
- Transparency, inclusivity, and participation are cornerstones of the engagement, consultation, and communication with stakeholders and civil society.
- The marine plan is built to include environmental stewardship, social and economic equity, and to improve ecological sustainable development.
- An ecosystem-based approach is used that recognises the full array of interactions within an ecosystem, including humans, rather than considering single issues, species, or ecosystem services in isolation.
- Article 15 of the Rio Declaration on Sustainable Development states that "In order to protect the environment, the Precautionary Approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation".

Practical approaches for developing the Seychelles Marine Spatial Plan were adopted as follows:

- Use "Global Best Practices" for MSP and for development of SMSP outputs.
- Balance ecological, economic, social, and cultural objectives in development of the Plan.
- The outputs of the Plan must be feasible, practical, implementable, and financially sustainable.
- The Plan is a dynamic, living document and will be adapted and revised over time.
- Use relevant spatial and temporal scales, recognising the importance of scale and resolution in the development of technical planning products and SMSP outputs.

Governance Principles. Ensure the Plan:

- abides by national laws, regulations, and acts
- respects international agreements
- integrates and identifies gaps in existing policy, management plans, strategies, and action plans
- ensures transparency, inclusivity, and participation
- employs integration and co-management
- upholds environmental stewardship
- ensures equity and sustainable development

Approach and Practice Principles. Ensure the Plan is:

- based on ecosystem-based management principles
- based on precautionary principle
- balances ecological, economic, social, and cultural objectives
- feasible, practical, and implementable
- financially sustainable
- adaptable and dynamic
- relevant at both temporal and spatial scales

Process Summary

MILESTONES AND PHASED APPROACH

The Government of Seychelles adopted a phased approach for the SMSP Initiative to achieve a marine protection goal by 2020 (Figure 3), in accordance with the debt conversion and Seychelles loan agreement.

The two phases have, in total, three milestones, each with a numeric target to gradually increase the percentage of the EEZ under marine protection for marine biodiversity from 0.04% to 30%. The two phases will result in coarse-scale (Phase 1) and fine-scale (Phase 2) zoning designs for the Seychelles EEZ and Territorial Sea.

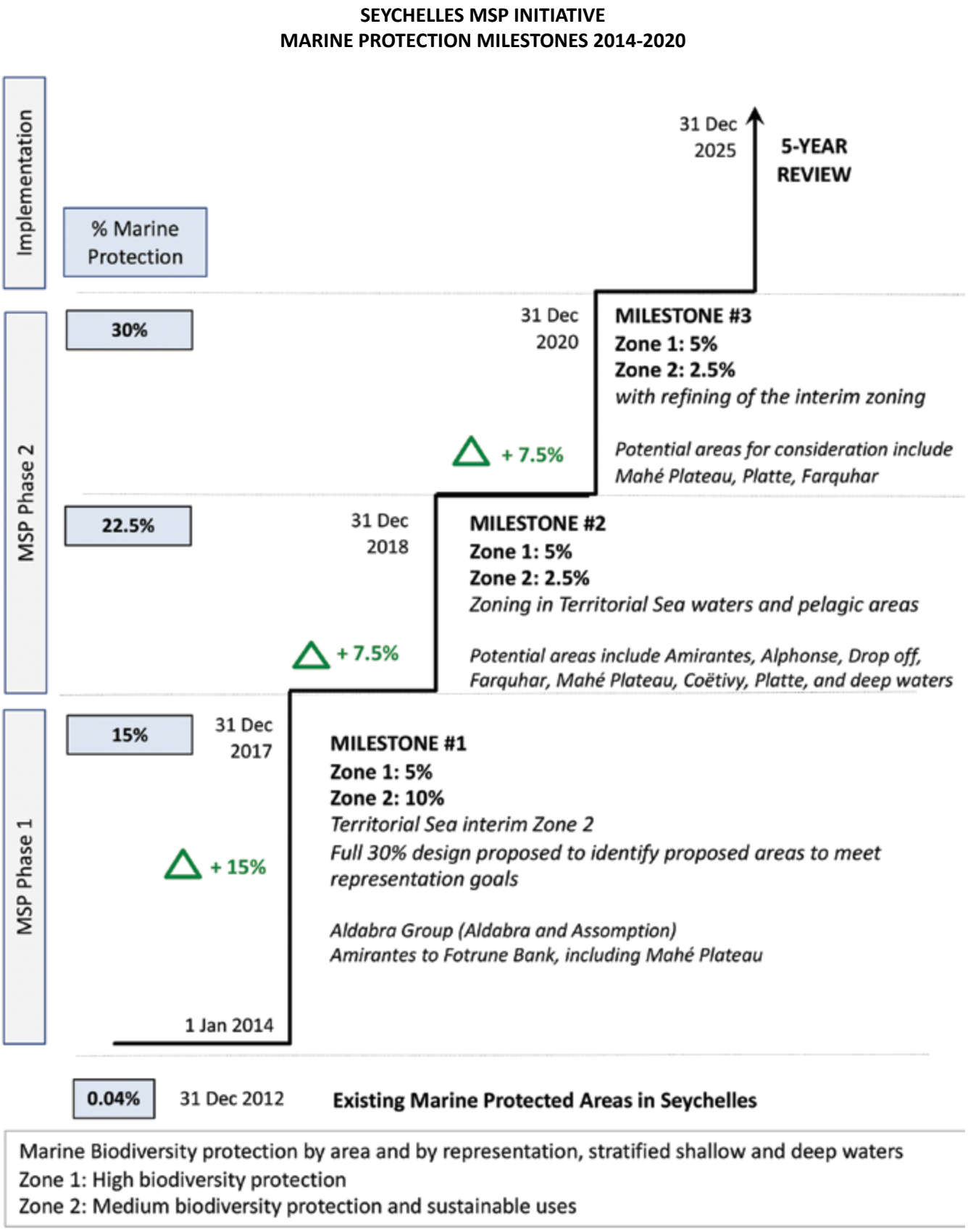


Figure 3. Phased approach to achieve marine protection and Seychelles MSP goals, October 2016.

Planning in Phase 1 was done at a coarse scale to address broad ecological, economic, and social objectives. Planning in Phase 2 was done at a finer scale and refined areas proposed in Phase 1 for marine protection areas. In all phases, the phased approach included stakeholder consultations and technical work to support achieving the SMSP goals and objectives.

The SMSP Phase 1, Milestone 1 zone areas were gazetted under the National Parks and Nature Conservancy Act (NPNCA) by the Ministry of Environment, Energy and Climate Change (MEECC) in February 2018, reaching a 15% goal for marine protections. This fulfilled the first milestone requirement of the Seychelles debt conversion and also delivered on Seychelles' commitment to the UN Sustainable Development Goals (UNSDG 14.4) and UN Convention on Biological Diversity Goal (protect 10% of marine waters by 2020).

The stakeholder consultations to review zoning design proposals for Phase 2, Milestone 2 took place from March–October 2018. The Cabinet of Ministers approved the marine areas for protection in November 2018 and the areas were gazetted on 12 April 2019 by the MEECC. Milestone 2 reached 26% in marine protection areas.

The consultations for Phase 2, Milestone 3 were initiated in March 2019 for the remaining 4% target of marine protection areas. More than 50 workshops, consultations, and meetings were held between March and October to propose and discuss new marine protection areas. The Cabinet of Ministers approved the marine areas for protection in October 2019 and the areas were officially gazetted by the MEECC on 26 March 2020 under the NPNCA.

The SMSP process used the NPNCA to gazette the marine protection areas until a new category for biodiversity and sustainable uses was legislated. With the finalisation of new legislation—the Nature Reserves and Conservancy Act (NRCA) in 2022—the Zone 2 areas were re-categorised to a Sustainable Use Area protection category.

GOVERNANCE STRUCTURE

The first task related to governance and decision-making was to develop a structure or framework for transparent and participatory decision-making. The governance and decision-making structure was designed in early 2014 and adapted over time to respond to issues that arose to improve decision-making and inputs from stakeholders for a transparent and equitable participatory SMSP process. The SMSP Governance Framework was designed to include representation from all the marine sectors representing the five major themes of the SMSP (fisheries, biodiversity, infrastructure and utilities, non-renewable energy, and tourism). The governance structure supported the SMSP process from the early decisions on committees and working groups during the zoning phases (Milestones 1–3) and during zoning to implementation including the final approval of the Plan document.

The schematic for the MSP Initiative Governance and Process Structures was developed initially for the planning design phase (Phase 1) that was expected to last from February 2014 to June 2015. In June 2015, the SMSP Initiative was advised that additional oversight of the process and approval of planning products was needed to ensure proper integration and alignment with all Ministries and relevant maritime organisations. In October 2016, the Seychelles MSP Executive Committee was formed in response to this advice and to ensure the successful completion and implementation of the Seychelles Marine Spatial Plan in accordance with Seychelles laws and legislative frameworks and obligations, including the debt conversion and SeyCCAT.

By 2016, the governance structure had four key components: an Executive Committee (EC), Steering Committee (SC), Technical Working Groups (TWG), and Core Team (Figure 4). Executive- or Ministerial-level decisions were made by the SMSP Executive Committee. The SMSP SC reviewed technical outputs and provided recommendations to the EC. The Technical Working Groups advised and provided guidance to the SC, including support to develop draft planning products. Members of the committees and groups included government, non-government organisations, public and civil society organisations, and private sector representation for ecological and socio-economic activities. Technical and administrative support for the SMSP was provided by the Core Team, which comprised The Nature Conservancy, consultants, MACCE Ministerial Secretariat and a SeyCCAT project coordinator.

Participation on SMSP Committees and/or Working Groups entailed responsibilities to their sector's interests, the broader public and civil society, and the Committee or Group itself. To ensure that each member's interactions were transparent, effective, and efficient as per the SMSP Guiding Principles of Decision-Making, ground rules and a Code of Conduct were outlined in each Terms of Reference.

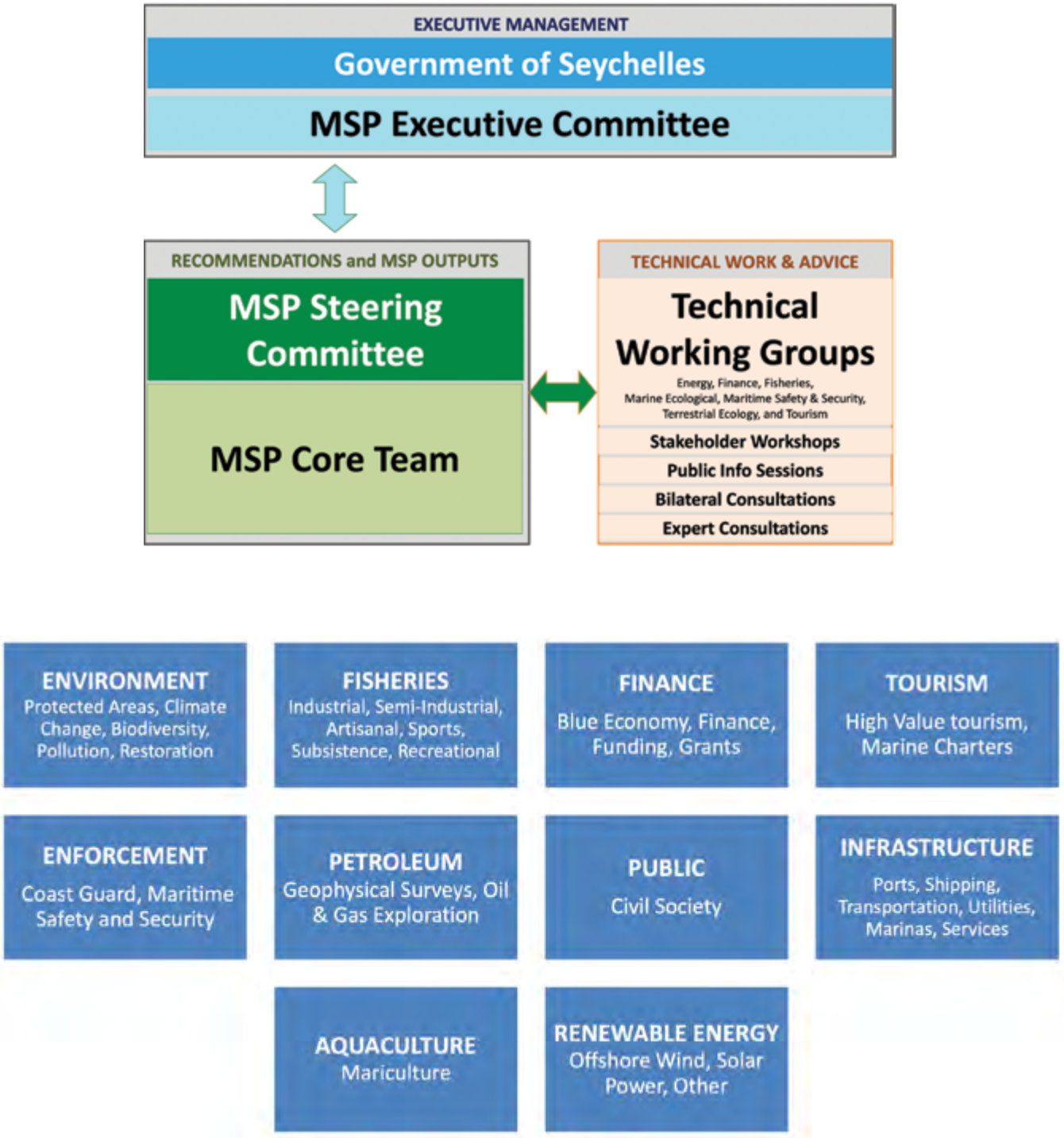


Figure 4. Governance structure for decision-making for the Seychelles MSP process (top) and stakeholder groups for representation (bottom).

In addition to the governance structure, a decision-making process diagram was developed to illustrate the iterative nature of the SMSP process discussions and decisions, and the relationship between the governance structure and decisions. Importantly, the 'full process' loop had a clear flow of information, inputs, and recommendations flowing from the Technical Working Groups, bilateral consultations, and public information sessions to the SC and then the EC for Ministerial-level decisions and Cabinet, where needed for Cabinet-level decisions. In the latter half of the SMSP process, a 'short process' loop was introduced between the EC and SC when recommendations from the SC were brought to the EC and additional information was requested by the EC before a decision could be taken, or additional review was needed by the SC before approval from the EC (Figure 5).

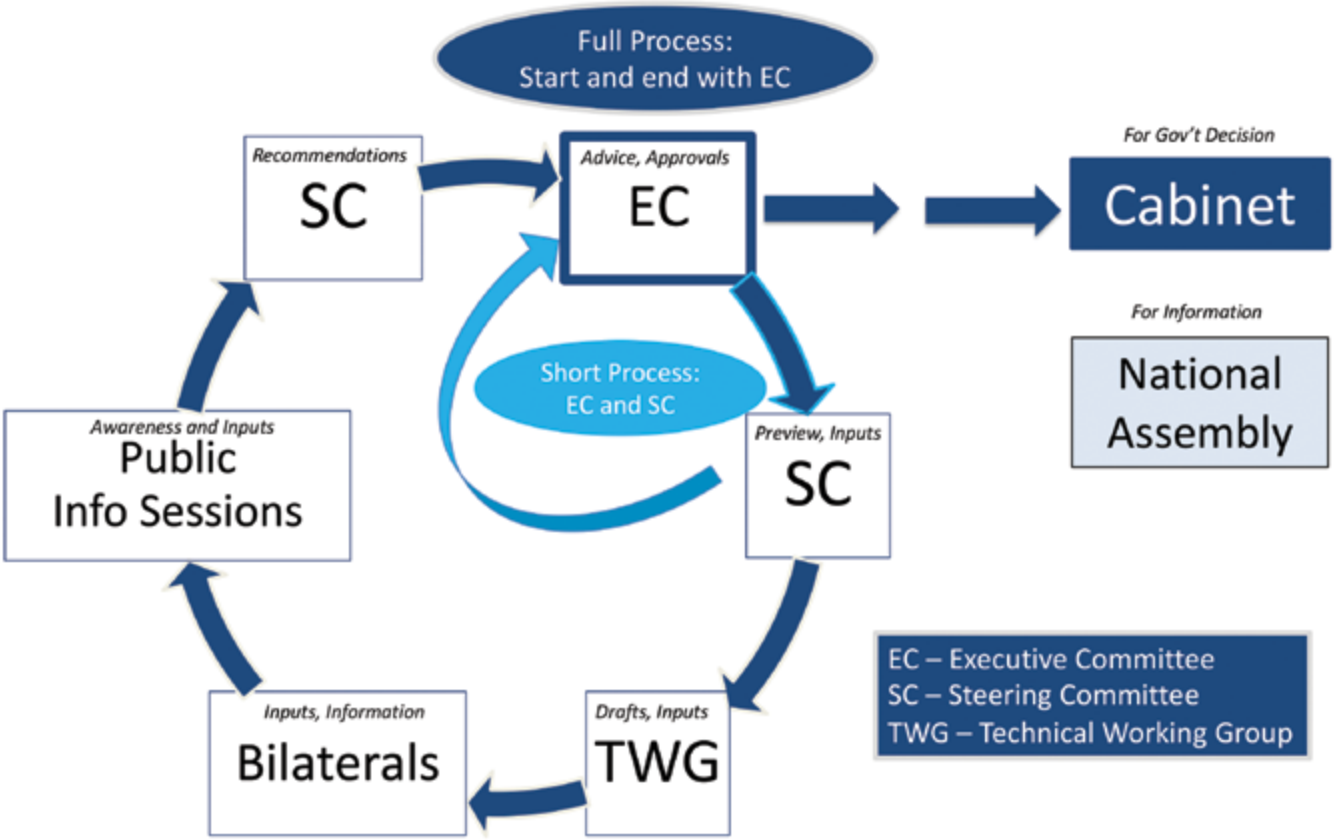


Figure 5. Iterative decision-making process diagram for the Seychelles MSP process, based on the SMSP governance structure.

SMSP Executive Committee (EC)

The SMSP EC was responsible for all recommendations and decisions being made at the level of Executive Management in the MSP Governance Framework. Before the Plan was presented to Cabinet, the EC was responsible for seeking endorsement of the Plan from the marine stakeholders engaged in the process. The EC did not have observers.

SMSP Steering Committee (SC)

The SC was launched in August 2014 with representatives from the Technical Working Groups and other participants. Stakeholders were invited to nominate representatives from their sector, association, and/or group to participate in the SMSP SC.

The SMSP SC provided technical leadership and oversight of planning outputs and the timeline to complete Phase 1 and 2 of the marine spatial plan. The purpose of the SC was to review planning outputs, provide

technical, policy, and legislative input, and work to find agreement on these outputs from all relevant sectors engaged in the SMSP Initiative. The SC provided their recommendation(s) on planning outputs to the EC for approval before outputs were presented to SMSP Stakeholder Workshops and in public open houses.

SMSP Technical Working Groups (TWGs)

The TWGs were launched in July 2014 to introduce the concept of zoning and confirm the TWG Terms of Reference. Initially for Phase 1 there were three TWGs: Socio-economic group, Marine Ecological group, and Terrestrial Ecological group (August 2014). Following stakeholder feedback for Phase 2, the group structure was adapted and revised to seven groups: Energy, Finance, Fisheries, Marine Ecological, Maritime Safety & Security, Terrestrial Ecology, and Tourism.

The SMSP TWGs were comprised of representatives from the five major thematic areas of the SMSP: fisheries, biological diversity, infrastructure and utilities, non-renewable resources, and tourism. The representatives were nominated by the relevant entities representing these sectors through a call for nominations from the SMSP Core Team. Members had official capacity within the sector as a part-time or full-time employee, consultant, advisor or appointed position to the relevant government ministries, parastatals, the private sector, non-governmental organisations (NGOs), or civil associations. Alternate members were also appointed for continuity and familiarity purposes in case the member was not able to attend meetings or respond to calls for review on planning outputs. An alternate member would usually participate in TWG meeting discussions only in the absence of the member that is usually represented. There was no minimum or maximum number of members in each TWG; the aim was to have representation for each sector.

A Chair and co-Chair from each TWG was nominated by each respective TWG to serve on the SMSP SC (for a total of 14 TWG members). At each SC meeting, the Chair or co-Chair was asked to attend and participate (i.e., minimum seven TWG members).

On occasion, guests or observers were able to attend or participate in TWG meetings at the request of the SMSP Core Team and/or TWG members when specific topic expertise or information and products to address questions on specific topics was required or needed. All requests for guests or observers were presented to the SMSP Core Team at least three business days before the meeting.

Ground Rules for Committees and Technical Working Groups:

- Use the best available knowledge and information to inform decisions for the marine spatial plan including best available ecological, economic, social and cultural data.
- Draw on the experience, knowledge, and expertise of government staff, resource managers, marine stakeholders, the conservation community, local experts, and scientists to develop sound, scientifically defensible decisions and recommendations.
- Utilize methods that are transparent in their application.
- Work cooperatively to achieve project goals.

Code of Conduct for Committees and Technical Working Groups:

- Demonstrate a commitment to the Committee or Group by working cooperatively and in good faith to move the process towards its goals and products, respecting the context and objectives of the SMSP Initiative described above.
- Demonstrate a commitment to the Committee or Group by planning for the continuity of their membership until the end of the process.
- Demonstrate respect for other members by respecting their values and interests, avoiding inflammatory language, listening to others without interrupting, and being punctual.
- Ensure honest and open communication and the timely sharing of information or concerns relevant to the Committee or Group.
- Ensure appropriate communication with external audiences that accurately describes the Committee or Group and is consistent with the Terms of Reference.
- Promote the planning process above individual interests.
- Ensure accountability to the interests of their sector and Committee or Group by:
    - attempting to fulfill all of the responsibilities outlined in these Terms of Reference,
    - communicating their sectors' issues and information to the Committee or Group, and
    - communicating progress to other audiences.

SMSP Core Team

The SMSP Core Team contained a Process and Science Lead and a Project Manager. Additional team members included a GIS analyst (consultant), technical planners (other TNC staff on task basis), a communications consultant (specific deliverables) and a project coordinator (part-time and/or some of the years). The SMSP Core Team facilitated and led the SMSP process on behalf of the government including, but not limited to, all technical work, communications, project management, and stakeholder engagement. The Core Team planned for and scheduled all stakeholder committee workshops and meetings, providing written reports for each meeting which were posted to the SMSP website. The Core Team developed all agendas, background materials, technical presentations, venues, and other meeting details for stakeholder consultations.

To introduce stakeholders to the SMSP process, an overview document of the SMSP Initiative was developed in May 2014. This document answered key questions about the SMSP Initiative:

- What is MSP? Methodology "101"
- What is the Seychelles Marine Spatial Plan (SMSP) Initiative?
- Why marine spatial planning for the Seychelles?
- How is the SMSP Initiative structured? Who is involved?
- What are the Guiding Principles of the SMSP Initiative?
- What will the SMSP Initiative outputs be?
- How long is the SMSP process?

STAKEHOLDER ENGAGEMENT

The Seychelles MSP Initiative used global best practices for marine spatial planning. The IOC-UNESCO Step-by-Step guidebook provided the basis for the global best practices. The design for stakeholder engagement began in 2014 and was developed over the next two years so as to ensure representation for all stakeholders in the process. It was adapted over time to meet the objectives set out in the Terms of Reference for each committee.

Committee Meetings and Technical Working Groups

The first TWG meeting was held in July 2014 to begin discussions about the zoning design and process. The first SC meeting was held in August 2014 to discuss roles and responsibilities and draft zoning proposals. The EC was formed two years into the process and the first meeting was held in October 2016.

Stakeholder Workshops

Stakeholder Workshops were initiated in February 2014, with the official launch of the SMSP process in May 2014. These workshops ranged in length from half-day to multiple days, depending on the topics. These workshops were especially important during key points in the SMSP process such as (a) when a new output was being developed, (b) for review of draft outputs after review from the SMSP committees, and (c) for input prior taking to the SMSP SC and EC for their recommendation and approvals, respectively.

Bilateral Consultations

In addition to the committee meetings, working groups, and stakeholder workshops, the SMSP Core Team scheduled bilateral or 1:1 consultations with key stakeholders throughout the SMSP process for additional information, data, review, and/or inputs. The bilateral consultations were also scheduled when key stakeholders were not able to attend workshops so that the SMSP Core Team could obtain their inputs. Bilateral consultations did not replace the committee meetings, working groups, or stakeholder workshops, they were in addition to or supplemental. Bilateral consultations were necessary especially for any sector that did not have government approved associations. Notes for these meetings were taken for the SMSP Core Team records.

Bilateral consultations in 2015 led to two informal sector groups, one for tourism charters and another for industrial tuna fisheries. The groups were formed on requests to the SMSP core team to facilitate coordinated inputs from stakeholders in these sectors. In the first instance, the SMSP core team facilitated several meetings with marine charter operators of the Inner and Outer Islands, who number in the 100s in Seychelles. Tourism representation was organised for the EC, SC and TWG meetings, as per other sectors. Secondly, the SMSP core team coordinated and facilitated 12 virtual meetings with more than six industrial tuna fisheries vessel or company representatives from Spain, France, Italy and Taiwan for their review and inputs to draft zoning designs and documents, primarily because they were not based in Seychelles and could not attend most stakeholder workshops. The industrial tuna fisheries group included purse seine and pelagic longline representatives.

Public Information Sessions

Stakeholder comments were captured in meeting and workshop minutes. A modified version of Chatham House rules was applied in that the internal minutes contained names and affiliations associated with each comment, but all external versions of minutes and reports were not attributed to individuals.

The SMSP process addressed equitable access to engage in the planning process with the introduction of an Honorarium. This funding was provided to all participants on the SC and TWGs. The EC members were excluded from the Honorarium program. An Honorarium Policy document was developed with inputs from the EC and approved on 19 October 2018. Previous to this approval the SMSP process worked from a draft policy with documented Honorarium expense reports submitted for the meetings.

It is well documented that building trust with stakeholders is a top priority for a successful marine spatial planning process. The Core Team's experience with other MSP and MPA planning processes both in Seychelles and globally provided useful guidance on best practices for engaging with stakeholders.

Stakeholder engagement for the SMSP was extensive and was the most participatory process that Seychelles has undertaken for marine or land use planning. A total of 324 workshops and meetings were held between February 2014 and April 2025, including with Cabinet, National Assembly, EC, SC, TWGs, stakeholder workshops, public information sessions, and bilateral consultations (Figure 6). In addition, weekly Core Team calls were held from April 2015 – June 2025 plus quarterly coordination calls with SeyCCAT, SMSP core team and TNC for planning SMSP implementation from 2020-2025.

Over the course of the SMSP process, a total of 389 individuals were invited to participate from 103 organizations representing 20 sectors; of the invited participants, 98% attended at least one meeting. Attendance rate across all meetings was 75% of invitees, with the remainder sending regrets or no response. All advice was minuted and posted to the SMSP website, with more than 4,000 comments, inputs and questions during the SMSP process, not including the comments received during bilateral consultations.

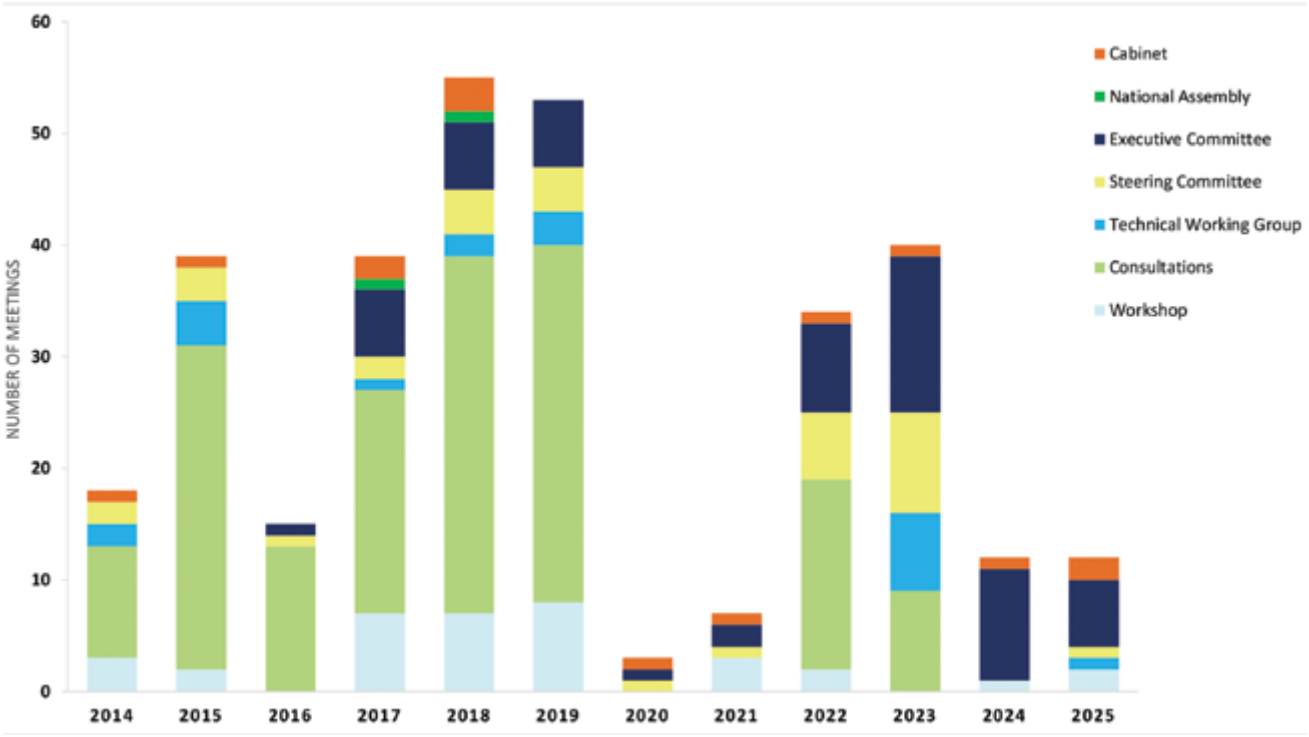


Figure 6. A summary of stakeholder engagement for the SMSP process from 2014–2025 showing the total number of meetings each year with the EC, SC, TWG, stakeholder workshops, consultations, and presentations to Cabinet or National Assembly.

A full analysis and summary of the SMSP stakeholder engagement process is provided in an Annex, with data or information compiled from process documentation and stakeholder advice logs. The SMSP employed lessons learned from other marine spatial planning processes and practitioners around the world to design the stakeholder engagement and participation process and is committed to sharing information that may benefit other marine spatial planning processes.

ADVICE LOG

The advice log is an essential planning tool that is commonly used in marine spatial planning to compile stakeholder advice so that queries or summaries can be produced or developed on process topics or themes. With lessons from other marine spatial planning groups around the world, such as the Marine Plan Partnership

of the North Pacific Coast (MaPP) in Canada, the SMSP process used an 'advice log' spreadsheet to compile all comments received during stakeholder committee meetings and workshops. The primary purpose was to track all of the advice received and ensure advice was reflected in planning documents and the Plan. Secondarily, the advice log was used to query and summarise all inputs from stakeholders on particular topics. For example, the advice log was queried to create a summary of comments and viewpoints for the EC to inform discussions and/or decision-making on these topics:

- Amirantes Group
- Artisanal fishing
- Assomption Island
- Bird Island
- D'Arros
- Motorised devices/motor watercraft (jet skis)
- Petroleum exploration
- St Joseph
- Subsistence fishing

COMMUNICATIONS

In a public, participatory, and inclusive process, the SMSP balanced transparency and inclusivity with respect and sensitivity for the stakeholder inputs. The SMSP process team consistently balanced transparency and confidentiality throughout the process and communicated the information to all stakeholders for their inputs.

A Frequently Asked Questions (FAQ) document was developed in 2014–2015 and updated with new questions as they appeared during Phase 1 consultations. This FAQ document was most useful during the early stages of the SMSP Initiative.

During workshops and committee meetings, inputs were sometimes preliminary or contained confidential or proprietary information. Social and cultural information were sometimes provided and needed to be kept confidential or there could have been risks to the long-term preservation of the cultural value in its location.

All communications and engagement methodologies were discussed with the SC and EC and were approved by the EC before being implemented. A communications plan was drafted in 2015 to guide the external communications for the SMSP process. Capacity to develop regular updates or newsletters was limited, however, the aim was to produce two newsletters a year with updates for the stakeholders and civil society. When newsletters could not be produced, updates were sent via email to all stakeholders.

The SMSP website was an important communications tool to feature and locate all key documents. The SMSP website was first developed in 2014 to share information about the SMSP process and post events and news. The website was the most important method to communicate broadly and be a repository of information to share with stakeholders and the public about the SMSP process. The website contains dates for events and workshops, SMSP outputs that were finalised or approved, as well as general information about the process. Documents were shared publicly once they were approved. See Lessons Learned and Challenges.

Using social media for communications was discussed several times during the planning process. Early on a decision was taken by the EC and government that the SMSP process would not use social media such as Facebook and Instagram to share information. Information on the SMSP ould be shared through respective Government platforms such as the MEECC website or social media pages. One of the reasons for this was that the SMSP Core Team was small and capacity was very limited to monitor and/or respond to stakeholder or public comments on social media. In addition, it was important to convey that the Government was the lead for the SMSP, and there were already personnel in place to manage social media platforms related to these government activities.

OUTPUTS

Key outputs for the SMSP included the following items in two phases. Phase I of the Initiative was launched in February 2014 and concluded in early 2018. Phase 1 created the foundation for a coarse-scale zoning design in waters beyond the Territorial Sea and draft management considerations for the first comprehensive MSP in Seychelles. Phase 2 included refining the zoning design and management considerations for the Phase 1 areas, identifying the remaining areas for the 30% marine protection goal, and advancing improved management for all Seychelles' waters in support of the Blue Economy agenda and other national priorities. In Phase 2, the workplan included implementation governance mechanism, costing and financing, capacity analyses, and other priority activities. The outputs of the SMSP included the following across the three Milestones and the zoning to implementation phase:

Phase 1: Milestone 1 (2014–2018)

- Governance and decision-making process
- Guiding Principles
- Spatial data catalogue for economic uses (biodiversity provided by UNDP-GEF Programme Coordinating Unit)
- SMSP Atlas maps for spatial layers used to inform zoning design
- Zoning framework and planning tools
- Legislative and Policy Analysis (consultant)
- Stakeholder workshop outputs and reports to capture input and discussion
- Spatial representations of stakeholder preferences
- Spatial decision-support tools
- Communication Plan
- Website
- Draft Marine Plan including zoning design and management considerations
- Draft implementation plan
- Media-Info Pack
- Costing and Financing Analysis 1.0 (GoS-UNDP-GEF)

Phase 2: Milestones 2 and 3 (2018–2020)

- SMSP Atlas
- Climate-change Risk Mapping
- Final Zoning Design
- Allowable Activities Tables and associated documents draft
- Marine Spatial Plan draft
- Ecosystem Services for Marine Protected Areas
- SMSP Policy
- Management Plans (consultants)
- Socio-economic impact analysis for Industrial Fisheries
- Implementation governance mechanisms

Phase 3: Zoning to Implementation (2020–2025)

- Allowable Activities Tables
- Training
- Management Plans (consultants)
- Capacity Needs Assessment (consultant)
- Legal Considerations and Roadmap 2023 (consultant)
- Costing and Financing Analysis 2.0 (consultant)
- Regulations
- Marine Spatial Plan
- Control, Monitoring and Surveillance (CMS) plan for MPAs
- Co-management agreement template
- Legal manual for authorised officers
- Management plan templates
- Seychelles Ocean Research Agenda (SORA)

Box 1: High-level summary of key milestones and dates related to the Seychelles MSP Initiative.

Year	Timeline or Milestone
2008	International Monetary Fund Economic Reform Program
2009	Piracy peaks in the Indian Ocean; fisheries closures in Seychelles
2010	UN Convention on Biological Diversity Rio+20 output of 10% protected areas by 2020
2012	Seychelles commits to protect 30% of its ocean waters (EEZ and Territorial Sea)
2012	Draft Management Plan for artisanal and recreational demersal fisheries in Seychelles
2013	Seychelles endorses a new Protected Areas Policy
2013–2015	GoS-UNDP-GEF project to identify high biodiversity areas using Marxan
2013	Government of Seychelles begins MPA network planning process for 30% protection
2013	Debt conversion agreement negotiations underway for $80M in debt refinancing
2014	Government of Seychelles commits to comprehensive marine spatial planning for EEZ
2014	Seychelles MSP Initiative started, facilitation by The Nature Conservancy
2014	SMSP spatial data catalogue created and planning tools developed
2014	Participatory mapping with stakeholders to identify high priority areas for use and activity
2015	First draft SMSP zoning design presented to stakeholders (January)
2015	Marxan analysis to describe fishing activity for semi-industrial and artisanal boats from (VMS)
2015	SeyCCAT Act (Act 18 of 2015) passed
2015	Decision taken for SMSP to first focus on areas outside Territorial Sea (August)
2015	Decision taken to structure SMSP in two phases and three milestones (September)
2015	Draft management plan for demersal fisheries on Mahé Plateau stakeholder review
2016	Debt conversion agreement finalised for $21.6M (February)
2016	SeyCCAT operational (November)
2016	First loan repayment to impact investor (August) and first loan repayment to SeyCCAT (August)
2017	Draft MSP zones proposed for Phase 1 (June)
2017	Draft Seychelles MSP Policy
2017	SeyCCAT Blue Grants issues first call for proposals
2017	Cabinet approval of the Mahé Plateau Trap and Line Fishery Co-management Plan
2018	World Bank approves USD $20M in sustainable fisheries and resource management
2018	Milestone 1 areas designated by MEECC (April)
2018	Consultancy started for developing Implementation and Governance Arrangements
2018	Socio-economic analysis of Seychelles tuna fisheries
2019	SMSP Costing Analysis 1.0 by GoS-UNDP-GEF
2019	Milestone 2 areas designated by MEECC (February)
2020	Milestone 3 areas designated by MEECC (March)
2020	Global COVID-19 pandemic – consultations paused
2020	SMSP Policy approved by Cabinet (October)
2022	SMSP consultations relaunched following pandemic – first in-person workshop (April)
2022	Interim SMSP governance mechanism approved – Seychelles Ocean Agency
2022	SeyCCAT Act amendment
2022	Nature Reserves and Conservancy Act (NRCA)
2022	Maritime Zones Orders (Baseline, Territorial Sea, Contiguous Zone, and EEZ)
2022	Evaluation of Ecosystem Goods and Services for Seychelles' Existing and Proposed PA System
2023	Regulations for criteria for the classification of Marine Protection Area under NRCA
2023	Finalisation of Allowable Activities Tables and associated documents
2023	Reclassification of the eight Areas of Outstanding Natural Beauty as Sustainable Use Areas
2023	SMSP Unit formed for SMSP implementation (December)
2023	Legal Considerations & Roadmap for implementation of the SMSP
2024	Executive Committee approves Allowable Activities Tables (May)
2024	Development of legal tools to sign the Plan into law
2024	SMSP Costing Analysis 2.0
2024	Government endorsement of management plans for three Sustainable Use Areas
2025	Capacity needs assessment and building plan for the SMSP and MPAs of Seychelles
2025	Seychelles MSP regulations signed into law 31 March 2025 (S.I. 18 of 2025)
2025	Seychelles Cabinet approves Marine Spatial Plan

Planning Tools

Planning tools are developed and used around the world to support decision-making and discussions for marine spatial planning and other planning processes. The SMSP developed multiple decision-support tools and undertook extensive spatial analyses to support the discussions on new marine protection areas and MSP Zones.

SPATIAL DATA CATALOGUE

Marine spatial planning depends on the availability of spatial data that describe patterns of human use and biodiversity across the planning area. A comprehensive spatial database of this nature does not exist for many geographies, and planners must develop approaches to integrating assorted data sources produced by numerous government agencies, non-government organizations, and other entities. Data gaps are often filled via expert knowledge provided by stakeholders, as well as through additional data analysis and/or modeling efforts. At the outset of this planning process, we identified the need for a spatial database that integrates what is known about both the marine economic uses and the biodiversity elements that occur across Seychelles' EEZ.

A Geographic Information System (GIS) facilitates spatial data collection, data management, spatial analysis, cartography, and the sharing of these data and analysis results. We employed GIS in all of these capacities in the process of developing this plan. To support marine spatial planning in Seychelles we used GIS technology to create an integrated spatial (GIS) database and associated custom spatial analysis tools that together function as a Decision Support Toolkit (DST) for planning (Figure 7). The DST provides a standardized framework for documenting the locations of priority marine use areas and biodiversity elements and supports the ongoing development of zoning scenarios that directly incorporate this information. The SMSP DST was designed to be transparent, easily updated, and to facilitate the ongoing refinement of zone boundaries as new information becomes available over time. We used the integrated GIS database and DST to: (1) create maps depicting the patterns of biodiversity and priority areas for the different marine user groups ("stakeholder preferences"), (2) analyze the representation of these values in specific locations across the EEZ, and (3) generate multiple alternative spatial zoning scenarios that quantify in common terms the potential trade-offs associated with different zoning configurations.

At the outset of this planning process, a comprehensive spatial database representing the patterns of biodiversity and socioeconomic activities in Seychelles' waters did not exist. Spatial data depicting these values were obtained from multiple government and non-government entities throughout the duration of the SMSP process in varying formats and across multiple scales, and as such the overall picture of marine uses and patterns of biodiversity evolved through time as more specific place-based information was provided to the planning team. To be most effective, the spatial database framework used in this planning exercise needed to support the standardization and ongoing integration of new spatial data sets as they became available, as all of these data together provide the foundation for zoning-related decision-making.

The integrated spatial database and associated analysis tools described here were developed to provide quick and efficient quantitative decision support to the SMSP Core Team and partners, supporting the development of alternative zoning design scenarios, the evaluation of progress towards high-level SMSP goals for representation of 30% of Seychelles' waters by area and by each conservation feature type, and for the exploration of trade-offs between alternative zoning scenarios.

The following describes the development of an integrated spatial database and the application of spatial analysis tools that enabled the initial identification of priority areas for discussion and the ensuing iterative refinement of zone boundary scenarios supporting Seychelles' Marine Spatial Plan. The development and application of a spatial decision support tool for use in the Seychelles' MSP process involved the following general steps:

1. Data compilation: Gather spatial data from various sources, representing biodiversity, human activities, and other relevant geospatial information.
2. Create GeoPDF maps for use in stakeholder consultations and participatory mapping exercises.
3. Develop the integrated spatial database:
    a. Develop a standardized planning unit framework.
    b. Integrate available spatial data with the planning unit framework.
4. Create new spatial data identifying stakeholder preference areas for each marine sector through participatory mapping exercises.

5. Integrate identified stakeholder preference areas for zoning into the planning unit framework.
6. Develop interactive representation analysis tools within the ArcGIS environment to streamline development of alternative draft zone boundary designs.
7. Specify representation goals for biodiversity features and stakeholder preference areas.
8. Create Marxan with Zones database.
9. Create Marxan with Zones scenarios.
10. Analyze trade-offs between Marxan with Zones scenarios in terms of values captures and areas selected.
11. Share maps and data packages with the SMSP data manager.

Figure 7. Spatial data catalogue themes for the SMSP process.

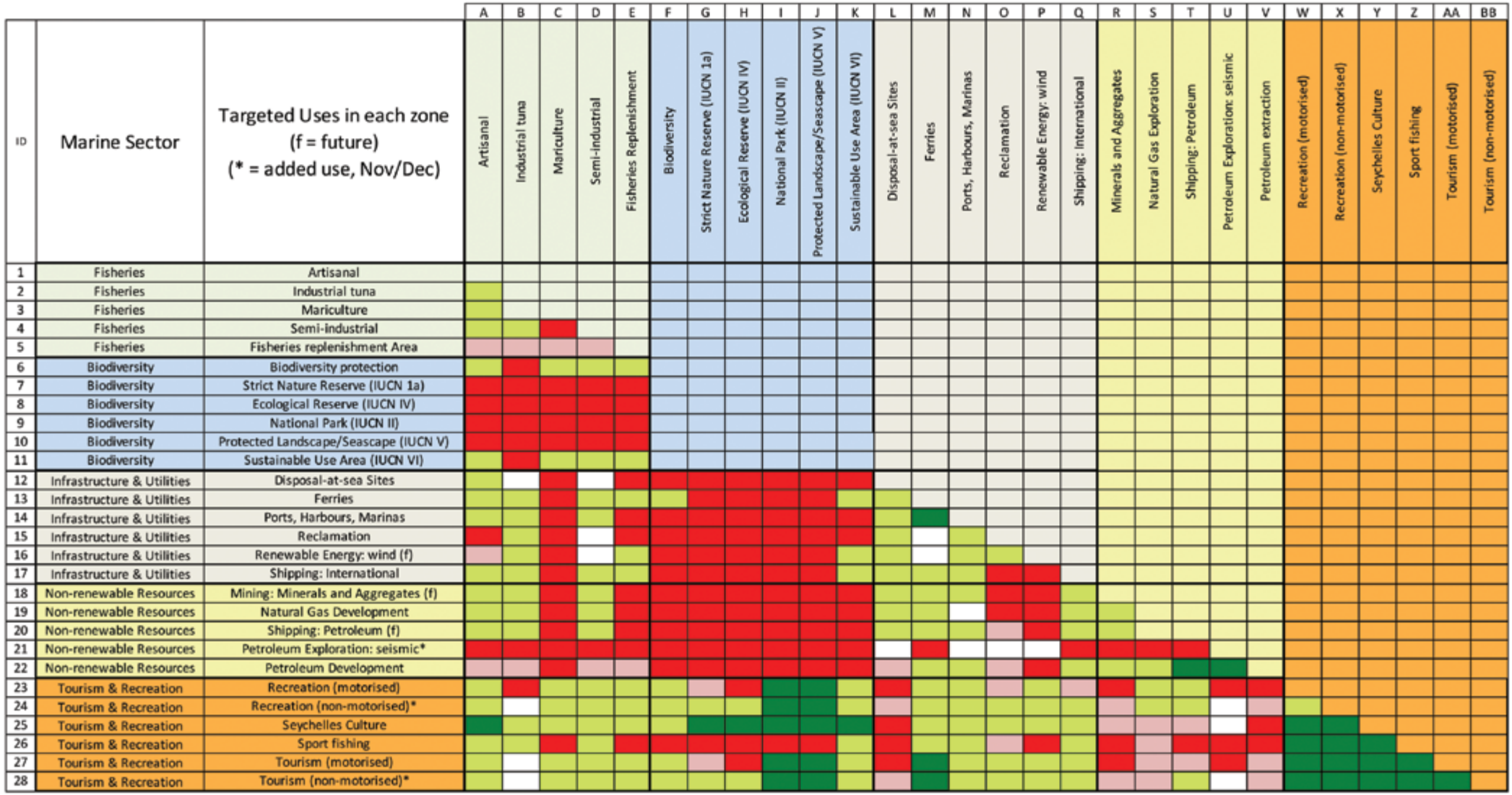
COMPATIBILITY MATRIX

A compatibility matrix was developed during Milestone 1 to support the discussions about allowable uses and activities in marine protection areas and creating a zoning design for the SMSP goals and objectives. Examples for a compatibility matrix were reviewed from the Saint Kitts and Nevis marine spatial planning process in the Caribbean, the California Marine Life Protected Area Initiative (MLPAI), and the Marine Plan Partnership for the North Pacific Coast in Canada (MaPP).

The compatibility matrix was developed between July 2014 and June 2015 with TWG and SC members, with inputs provided during public information sessions. More than 14 revisions resulted in four versions of the matrix, with refinements on the compatibility determinations between marine sectors as well as the recommendations on the spatial conflict levels. The final version was completed in June 2015 (Figure 8).

Using the results of the compatibility matrix, a spatial analysis was done in Milestone 1 to examine the known distribution of marine uses and activities and identify where they overlapped within the EEZ. Results from this coarse-scale analysis showed that the 'hotspot' of spatial conflict—where more than five themes overlapped—was just east of the Mahé Plateau, between the drop-off and African Banks. In general, no more than 2–3 uses or activities overlapped throughout the planning boundary.

SEYCHELLES MSP INITIATIVE
COMPATIBILITY MATRIX - FOR DISCUSSION



Facing Page:

Figure 8. Compatibility matrix developed during the SMSP process 2014-2015 to inform the zoning framework and draft zoning designs: matrix (left) and legend (right).

When both uses occur in the same space and/or time, there are **usually no conflicts or adverse effects** to either or both uses. The two uses can co-exist. Rules of the Road apply for vessel traffic.	Yes
When both uses occur in the same space and/or time, **there may be temporary adverse effects or conflicts.** Actions must be taken to avoid conflicts. Develop conditions for use to avoid conflicts and adverse effects. Rules of the Road apply for vessel traffic.	maybe - Temporary
When both uses occur in the same space and/or time, **there may be permanent (10+ years) adverse effects or conflicts** to one or both uses. Avoid spatial-temporal overlap, and develop conditions for use to avoid or minimise adverse effects.	maybe - Permanent
When both uses occur in same space and/or time, **there are adverse effects or conflicts** to either or both uses. One use will preclude the other use. Ensure there is no spatial overlap. If overlap is unavoidable, mitigation measures may be required.	*No*
Uses do not overlap	*No overlap (blank)*

PARTICIPATORY MAPPING

An essential consideration for marine spatial planning is how to capture information that is only available locally (in the community), and the current priorities or values of stakeholders. Participatory mapping is a successful approach to fill data gaps, add new data in data-poor geographies, and capture preferences or values that may not happen during typical data collection approaches. Participatory mapping is also one way to ensure that there are maps or data layers for all key conservation features as well as each key sector that is engaged in marine spatial planning so that all sectors are represented equitably. As is the case for other processes, like the CBD Ecologically or Biologically Significant Marine Areas EBSA), local experts and a Delphi approach can provide additional or new locations of species and habitats including breeding or spawning locations and migratory routes. As per best practices, the SMSP needed to ensure that representation of uses and activities was equitable (a Guiding Principle). The importance of participatory mapping was especially high for those sectors where data collection systems and maps were not yet available or data would not be available during the zoning design process. In addition, some of the available data were out of date and didn't reflect the current stakeholder preferences for their priority or high-value areas, as was the case for the small-scale artisanal fishing and semi-industrial fishing and sports fishing charters.

This type of mapping can be done using one or multiple drafting options such as large paper maps, physical or digital charts, software applications, and digital platforms. The SMSP explored several options for participatory mapping, including a SeaSketch project and purchasing digital charts or chart software. Owing to limitations in internet connections in the country in 2014–2016, SeaSketch was not an option at that time. The high cost of purchasing digital charts for the entire EEZ at multiple scales ruled out this option as well. In May 2014 a decision was taken to use Adobe GeoPDF software for participatory mapping.

Summary of considerations for selecting a participatory mapping tool:

- internet connectivity and availability at workshop locations
- cost of the software
- stakeholder access to internet and computers after workshops
- stakeholder availability to travel to Mahé for participatory mapping
- coarse- and fine-scale mapping options available with software

Participatory mapping was undertaken from June to October 2014, with the preparation of materials and the base data layers from June to September. The participatory mapping took place at Stakeholder Workshop #3 in August 2014 and Technical Working Group Meeting #2 in October 2014 with the prepared GeoPDFs. The full-day workshops resulted in many "geomarks" drawn by participants with notes capturing local knowledge inputs. The geomarks were processed and then ground-truthed with the TWG members through June 2015 to develop participatory mapping layers for the SMSP geodatabase and spatial analyses.

Key local knowledge captured during participatory mapping:

- local knowledge for marine biodiversity—important areas (including nursery and nesting areas) for turtles, seabirds, marine mammals, and sharks
- artisanal fishing mapping of high-priority areas on the Mahé Plateau, Amirantes Group, and Fortune Bank. Identification of consistently high-value areas south of Mahé in areas and drop-off locations
- mapping indications of high catch areas because available data provided fishing locations only for artisanal fishing
- sports, marine charters, and recreational fishing mapping of high-value areas up to 16 km from the drop-off of the Mahé Plateau and Amirantes Group
- identification of locations of high-value fishing, especially areas used consistently used over time by local fishers. This provided local knowledge to resolve gaps in understanding where important fishing areas were located because the SMSP was mapping catch or logbook data using the best practices 3-boat minimum rule
- priority fishing locations for industrial fishing data to assist with interpretation of coarse-scale data received at the ¼-degree grid cell
- sea cucumber fishing priority areas on the Mahé Plateau and in the Amirantes Group (spatial locations were not available to the SMSP until 2016)

DECISION SUPPORT TOOLS

We created a spatial analysis framework consisting of standardized spatial planning units that enabled the integration and analysis of multiple spatial data streams supporting the zoning design process. Implemented as a set of tessellated hexagons covering Seychelles' EEZ, these "planning units" defined the building blocks upon which the various zoning design versions were initially constructed and analyzed. These planning units can be described as "smart puzzle pieces", each containing information about the biodiversity elements and human activities that occur in each specific location. Planning units can be described individually or summarized as groups to expose values in specific places and across regions, and as such they served as the "minimum mapping unit" for assessments of alternative SMSP zoning designs. Specifically, hexagonal units of 1 km² were designated for relatively shallow areas with a depth of up to and including 200 meters, whereas larger units of 50 km² were defined for areas exceeding 200 meters in depth. This distinction in scale takes into account variations in data resolution for shallow versus deep water regions and recognizes the inherent differences in the scale at which human activities and ecological processes operate in these respective areas. These planning units were used as the primary statistical summary areas for describing marine use patterns and biodiversity representation across the planning region. As such, they were the foundation for assessments of alternative draft zone boundary designs developed during the SMSP process.

SMSP ATLAS

An atlas is a key planning tool for marine spatial planning. An atlas can provide stakeholders and other users with information about key ecological, social, economic, and cultural activities and values that are in support of the marine spatial planning goals and objectives. A Seychelles MSP Atlas was started in 2014 to support the overall process and development of specific zoning designs. The purpose of the SMSP Atlas was to display available, relevant data layers and capture or document stakeholder spatial information that was provided to the process via participatory mapping (e.g., sport fishing priority areas). The stakeholders and planning team used the Atlas to view and explore spatial data for a transparent and evidence-based approach.

The data layers used to create maps in the Seychelles MSP Atlas were obtained from multiple sources and data sharing agreements were signed between the government and sources and/or TNC and sources to obtain the layers. The Atlas map list included key sectors and stakeholder values for the SMSP: marine biodiversity, fisheries, marine infrastructure, shipping and transportation, non-renewable resources, renewable energy, and tourism and recreation.

The Atlas maps were used extensively in 2014–2019 to visualize the marine ecosystem and human uses and activities (Figure 9). Paper and digital maps were used during zoning design discussion, including a 40-map draft Atlas and a mini-Atlas with 20–25 maps. All SMSP SC members received a printed mini-Atlas and copies of the mini-Atlas were available for stakeholders plus two copies of the full 40-map Atlas were available to all participants at each workshop or meeting. In addition, PDF versions of the atlas maps were saved to USB drives and could be used on personal laptops during workshops and between consultations.

The printed SMSP mini-Atlas contained these maps for use during zoning design consultations:

- Western Indian Ocean overview
- bathymetry
- deep seafloor geomorphology
- shallow seafloor geomorphology
- ocean currents NW monsoon
- ocean currents SE monsoon
- protected areas
- artisanal fishing
- semi-industrial fishing
- industrial purse seine fishing (fish aggregating device (FAD), free school, all)
- industrial pelagic longline
- petroleum exploration
- area maps: Aldabra, Bird and Denis, Coco de Mer seamount, Farquhar, Mascarene Plateau
- Marxan high biodiversity areas
- Marxan with Zones selection frequency (biodiversity scenario, economic scenario)

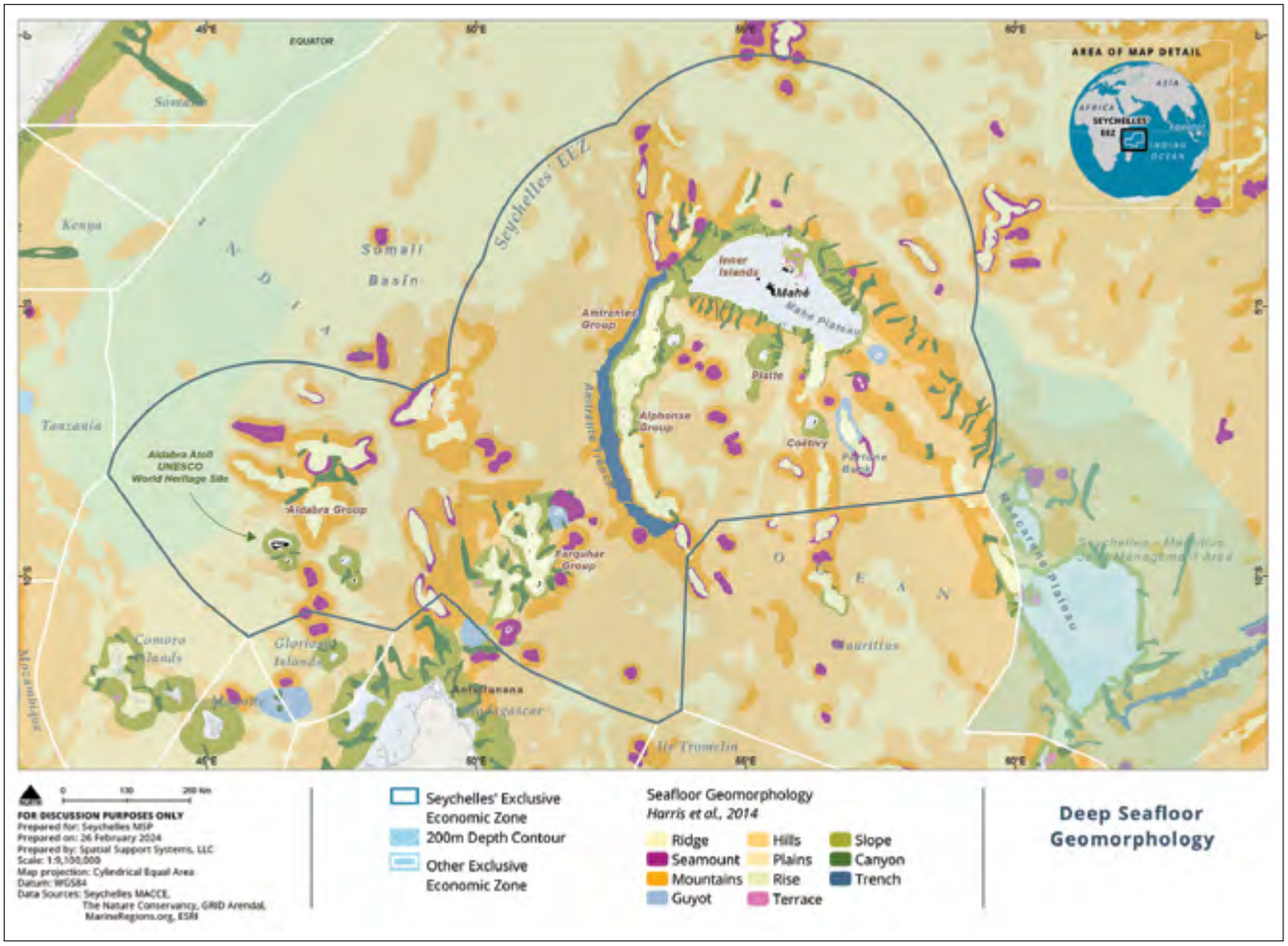


Figure 9. Deep seafloor geomorphology map from the SMSP Altas for the Seychelles EEZ and Western Indian Ocean. Data source: Harris et al. 2014.

The SMSP Atlas will be available in print and digital versions for implementation. In the print version, the maps will be accompanied by data descriptions and other pertinent information on a facing page to the maps. Key references and data sources will be provided so that readers can find more information and facts to assist with interpretation of the data shown on each map.

Maps are available for viewing or download on the SMSP website. While the Atlas was in development during the SMSP process, individual maps were shared online for use outside of consultations and meetings. The SMSP Atlas will be useful for Ministries, stakeholders and civil society to support management of marine activities during implementation and learn more about Seychelles' ocean and Blue Economy.

CLIMATE CHANGE RISK MAPPING

One of the goals for the SMSP was climate change adaptation and the SMART objective was to develop climate change risk mapping for coral reef habitats. The climate change adaptation goal led to using resilience principles such as replication, connectivity, and representation for proposals for marine protection areas.

For the Seychelles United Nations Framework Convention on Climate Change (UNFCCC) Nationally Determined Contributions (NDC), led by MACCE and supported by TNC, SeyCCAT, and The Pew Charitable Trusts, the SMSP assisted with data layers for seagrass, mangroves, and coral reefs. The Seychelles' updated NDCs were submitted in July 2021 and included a commitment to apply nature-based solutions comprising mangrove and seagrass protections and a commitment to implementation of the MSP. A priority of the UNFCCC Conference of the Parties is to raise global awareness for the urgent importance to address climate change threats in the ocean as well as rapidly increase awareness and understanding of linking climate change goals (including the UNFCCC Race to Zero Campaign) to biodiversity protection and economic growth and development.

Climate change risk mapping was carried out using sea surface temperature (SST) and chlorophyll signatures and informed the zoning design process. Seychelles implementation of the Blue Economy and recognition of the high biological diversity values in the marine environment were also captured in the UNFCCC NDCs. MACCE and partners (SeyCCAT, PEW, and TNC) advanced work on NDCs in support of Seychelles' climate change and climate financing strategy. The purpose of climate change risk mapping was to analyse 10+ year time series data sets that represent ocean condition variables that could be relevant to defining the risk to habitats from climate change. One of the concerns for coral ecosystems in Seychelles and throughout the Western Indian Ocean is mass bleaching events. Improving the understanding of climate change impacts would inform zoning design proposals and integrate concepts of climate change resilience to the SMSP.

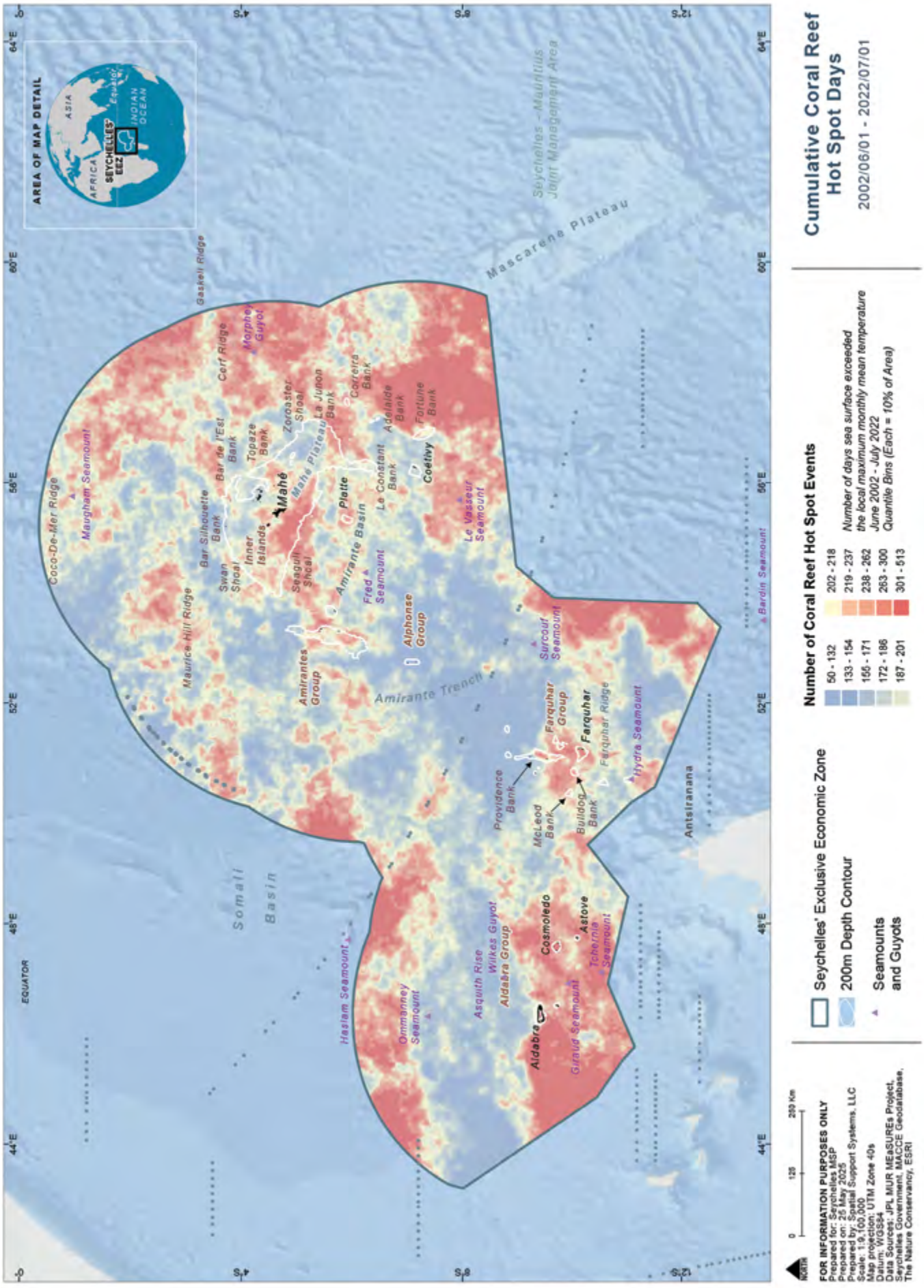
This was not a comprehensive analysis and in many ways was a pilot to test the integration of climate-smart methodology with existing marine spatial planning databases at a time when climate was still a new objective for global marine spatial planning efforts. Could we identify areas with different patterns of thermal stress over time and at a scale relevant to the SMSP zoning designs? In other words, using remote sensing data, we would identify areas with many anomalous (i.e., very warm) SST months to indicate potentially thermally impacted areas; conversely areas with few anomalous SST months might represent thermal refugia for corals.

The primary analysis in this project was a high-resolution data visualization for SST to measure trends across the EEZ through time and achieve a better understanding of patterns across space. This analysis used the number of heat stress months, defined as 1°C above the long-term average. A secondary analysis was done using ESRI's 3-dimensional time-space data structure, called the Space Time Cube, an 'Emerging Hotspot Analysis' toolset to enable location specific trends in time associated with various ocean conditions. Remotely sensed SST data were used from multiple satellite data products available to the public at varying spatial and temporal scales. The global data sets were from the Multi-scale Ultra-High Resolution (MUR) SST analysis anomaly at ~1-km spatial resolution from 2002–2019 for the 'heat stress months' and 2008–2019 for the Space Time Cube; both were monthly composites.

The visualization of the data and mapping over the EEZ revealed several areas with the highest number of months with anomalously high average SST (Map 2). These areas were over Fortune Bank and eastward to the EEZ boundary, the northwest section of the EEZ boundary including and west of the Coco de Mer seamount ridge, and the southern waters inclusive of the Farquhar Archipelago. The database also showed areas with no months with anomalously high average SST. These potential thermal refugia included the southern end of the Amirantes Plateau, Aldabra Group (Aldabra, Assomption, Cosmoledo, Astove) and deep waters in the central and western areas of the EEZ. These data and maps were used to inform proposals for high biodiversity protection zones and provided useful information for decisions in key areas such as the Amirantes Basin where trade-offs were discussed with stakeholders for balancing ecological and economic objectives. The integration with the SMSP Planning Units also meant it was possible to quickly subset the SST data to focus on discussion areas.

Points of interest related to this analysis:

- Developing a climate smart MSP requires multiple data sets, some of which are available globally from remotely sensed sources.
- These large data sets require substantial computing power to manage, analyse, and visualize them in GIS, which is an important consideration for any marine spatial planning process.
- Climate-smart marine spatial planning is more common now than in 2014, in particular, to look at resilience in a planning context for both biodiversity protection and socio-economic values and livelihoods.



Map 2. The number of daily exceedances of maximum monthly mean sea surface temperatures (hot spot events) between June 2002 and July 2022.

MARXAN

Marxan is a widely used software for conservation planning purposes. The software uses a spatial optimization algorithm to identify discrete areas on a map that will maximize the representation of a planning feature on land or in the water while minimizing the total size of the area required to do so. Marxan is used to inform spatial planning and can identify near-optimal spatial configurations for biodiversity features, ecosystem services, and human activities. Marxan can handle large amounts of data and analyse spatial patterns in large data sets. It is a valuable decision-support tool for highlighting areas of interest and high value, and generating multiple different outputs for discussion with stakeholders.

During the SMSP, Marxan was used three times as a decision-support tool for the zoning designs and milestones. It was used to inform proposals for the 30% marine protection goal and also to analyse fisheries data and trends.

First, the SMSP was supported by a GoS-UNDP-GEF project called "Strengthening Seychelles' protected area system through NGO management modalities". This project used an extensive participatory stakeholder process to identify key biodiversity features and used Marxan to identify the best options, or priorities, for expanding the marine and terrestrial protected area system of Seychelles. From 2013–2015 this project identified more than 191 biodiversity conservation features, gathered and processed key data layers, developed a hierarchical classification scheme for an integrated habitat map for marine and terrestrial environments, and provided multiple scenarios without and with cost layers for human uses. Klaus (2015) recommended the best scenario for expanding protection to cover 30% of the EEZ, including 15% in high-priority or core areas, and provided extensive recommendations and considerations for incorporating the Marxan outputs into the SMSP process.

Second, Marxan was used in 2015 to examine trends in fishing effort data and high-priority areas. Our aim was to leverage Marxan to identify areas of significance for these fisheries by analyzing multiple alternative solutions based on varied goals for representing fishing effort. By running multiple scenarios and analyzing the results, we aimed to gain insights into the historical spatial patterns and relative significance of different fishing locations within the study area. By leveraging Marxan as a data exploration tool and analyzing vessel locations as proxy for fishing effort, we identified areas that consistently exhibited high fishing activity through time. The Marxan approach, driven by representation and spatial efficiency, identified important areas for consideration regarding these fishing sectors and aligned them with the overall intent of developing efficient marine zoning designs. This approach benefited the SMSP zoning process by informing the efficient zonation of space, which helped to reduce the overall impact to the fishing sector and the future associated expenses associated with zone management.

Perhaps most importantly, this exercise conducted at the beginning of the SMSP process in 2014 resulted in stakeholder preferences maps specific to the artisanal and semi-industrial longline fishing stakeholder groups. These maps initiated valuable zoning-related discussions and provided the SMSP team with a more comprehensive understanding of the patterns and dynamics of fishing activity, which directly informed the development of zoning designs.

Third, Marxan with Zones was used in 2016 to develop alternative scenarios or options for zoning designs. It was possible to use Marxan with Zones at this point in the process because the Zoning Framework had been approved and was comprised of three zone categories. Three scenarios were created to contrast for a Biodiversity Bias, Economic Bias, and a middle scenario, a Blue Economy Bias. Cost layers were used for key tourism and artisanal, semi-industrial, and industrial fishing areas. All three scenarios achieved 15% area goals for each of Zone 1 and Zone 2. The habitat representation targets were met for all of the coarse-scale biodiversity targets and most of the fine-scale targets. The Biodiversity Bias scenario consistently selected specific areas such as the north drop-off on the Mahé Plateau, Platte, Coëtivy, Alphonse Group, Farquhar Archipelago, and Cosmoledo and Astove. The Economic Bias scenario avoided most of the key purse seine and longline fishing in the northern and southern areas of the EEZ as well as the high-traffic shipping areas. These spatial outputs were added to the SMSP Atlas maps.

Marxan was a useful decision-support tool for the SMSP zoning design process and provided multiple outputs to inform discussions and decisions. In all cases, stakeholders and local experts were essential to interpret the results and consider how best to apply the prioritisation selections for the SMSP goals and objectives.

FISHERIES ANALYSES

At the outset of the SMSP process in 2014 the Seychelles Fisheries Authority provided the SMSP team with spatially referenced statistical data describing the total industrial longline and purse seine tuna catch within Seychelles' EEZ from 2003 to 2012. These data were provided as summary tables referenced to discrete 1x1 degree spatial statistical units. We mapped the distribution of tuna catch for each fishery separately using spatial quantiles dividing the EEZ into three equal areas representing the top, middle, and bottom thirds based on the average total catch over the ten-year period. Stakeholder preference areas for the respective industrial fisheries were highlighted by selecting the top quantile class from each map. These areas represent the top third of the EEZ, by area, in terms of the average total tuna catch between 2003 and 2012, for each fishery. The preference areas obtained from the 1x1° data were integrated into the DST planning unit framework using a geometric overlay technique within the GIS that assigned each DST planning unit with an attribute indicating its spatial correspondence with these preference areas. This mapping exercise provided valuable insights into the historical patterns of industrial fishing across the EEZ, albeit at a coarse scale.

In 2018, we acquired more detailed spatial data from the Seychelles Fisheries Authority, specifically representing distinct tuna fishing locations between 2012 and 2016. This new data set provided more precise information on fishing locations and catch measurements, as compared to the 1x1 degree summary data. These data improved our understanding of fishing patterns in the industrial tuna fleets, and provided new insights by including fishing location and catch data from the previously unavailable semi-industrial longline fleet. This expanded data set enabled us to more effectively map and analyze the spatial and temporal variability of tuna catch across Seychelles' EEZ during this time period.

Spatial density refers to the concentration or distribution of a particular phenomenon or event within a given geographic area. In the context of our analysis, spatial density of tuna catch refers to how closely or sparsely the catch is distributed across different locations in the study area. It helps us understand the areas where tuna catch is more concentrated or dispersed, providing insights into the patterns and intensity of fishing activities. By examining catch density and integrating measures of temporal variability, such as the standard deviation of interannual changes in catch, we gained new insights into the patterns and dynamics of fishing activities across Seychelles' waters.

For this analysis, we utilized GIS to calculate both the spatial density and temporal variability of tuna catch. First, we employed a 50-km kernel density measure (moving window) to evaluate the spatial concentration of tuna catch for each individual year from 2012 to 2016. This process resulted in five separate annual data layers, each depicting the density of catch within a 50-km radius of each discrete map location during the year. Next, using these annual outputs we calculated the average and standard deviation of catch density for each location across the entire time period. These secondary outputs provided visual representations of the spatial distribution of average catch and the magnitude of variability in catch levels observed throughout the study period.

Initial outputs from the density calculations described above included the full range of density values across the EEZ, from low to high. To simplify and condense the complex patterns observed in these density layers, we first classified and then combined the mean and standard deviation catch density layers into a single unified data layer that could be used to more effectively visualize spatial and temporal patterns in the catch data. This approach resulted in more concise and manageable representations of these patterns on maps. We applied a three-category natural break classification to both the average catch density and standard deviation of catch density data layers. The classification procedure produced two new map layers: one indicating low/medium/high mean catch through time and another representing low/medium/high standard deviation of catch through time. These layers visually depicted the varying levels of catch and the degree of variability observed in different areas.

The final step was to combine the two classified data layers for each fishery. This resulted in a single-map representation of spatial and temporal variability of catch for the industrial longline, purse seine, and semi-industrial longline fisheries. Combining the data layers in this way resulted in a range of values for each fishery, representing the nine unique combinations of low/medium/high average catch and low/medium/high standard deviation of catch, as depicted in the legends associated with each map below. The generated maps enabled us to pinpoint distinct regions characterized by consistently high average catch, areas with intermittent high average catch, and areas where high average catch was infrequent.

This analysis revealed areas with consistent or variable catch density over time (2012–2016), shedding light on the stability and variability of catch patterns across different locations within Seychelles' EEZ (Figure 10). The resulting maps developed by the SMSP Core Team informed the SMSP zoning design process and this general approach can inform future fisheries management strategies as new data become available. These data and maps can play a supporting role in various management activities, including identifying important fishing grounds, as a general guide for area-based assessments of fish stock resilience, and as a tool to help recognize areas potentially susceptible to overfishing or depletion.

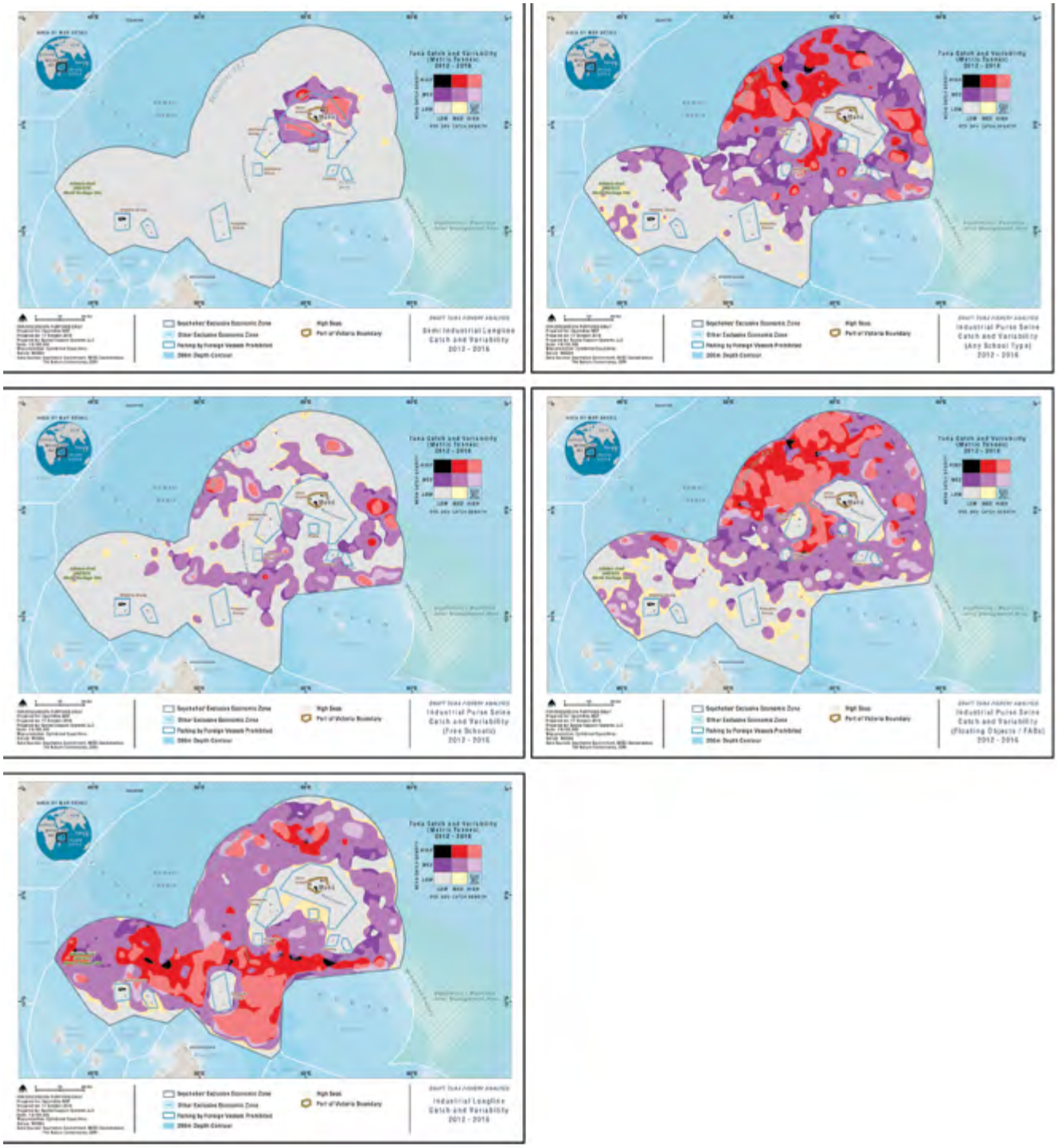


Figure 10. Fisheries analysis showing temporal and spatial patterns showing mean and standard deviation of tuna catch 2012-2016 for the semi-industrial longline, industrial purse seine all sets, industrial purse seine free school sets, industrial purse seine floating objects and industrial pelagic longline fisheries in Seychelles, mapped in 2018.

CHAPTER 3: Zoning Design

Introduction to Zoning

In 2012, the Government of Seychelles set a target for 30% marine protection, with half of this in "no take" areas to protect marine biodiversity resources conditional to raising funds for conservation. Also, in response to climate change threats (e.g., warmer ocean temperatures, sea level rise) and uncertainty surrounding the effects that these events will have on the marine ecosystem, the government adopted the precautionary principle and was making management decisions that are conservative for the ocean surrounding Seychelles. This approach was supported by the scientific community, including recent studies that show the importance of large, effectively managed marine reserves to support climate change resilience of the oceans to increasing threats including ocean acidification, decreased productivity and oxygen availability, and cumulative effects from human activities (Roberts et al., 2017). The 30% goal was both by area and by representation for species and habitats, and because of the large size of Seychelles' EEZ, the waters were stratified by planning units in deep water (> 200 m) and shallow water (≤ 200 m).

The objectives for new marine protections in deep water were different than in shallow waters because the biodiversity is different, the sensitivity to human disturbance is different, and the ecosystem status and condition are different. In shallow waters, for example, protections for coral reefs not only contribute to the long-term health of these ecosystems and support fishing and tourism activities, but they also support coastal protection functions that are important during high winds and tides. Deep waters have many unique benthic features such as seamounts, mountains, guyots, canyons, and plains. Pelagic ecosystems typically function at much larger scales than shallow and nearshore ecosystems, and marine organisms may travel hundreds or thousands of kilometers to forage and during migrations. The zoning design was developed using all best available data, incorporating information on surface currents, archipelagic ecosystems, fish life history, and gradients of biodiversity to propose areas for pelagic marine reserves that avoid high priority areas for socio-economic activity yet are close enough to source marine populations that they can be seeded by currents and replenished.

Tables of Allowable Activities were developed using information from stakeholders, published studies, and experts about each activity's environmental impact and the potential for compatibility or conflict with the objective of each area. The Allowable Activities Table identifies restrictions or conditions and specifies what will need to change over the long term.

In support of the Seychelles Blue Economy, the Seychelles MSP process developed criteria for improving sustainability of fisheries in Seychelles' waters. The SMSP provided an opportunity to advance discussions about 100% monitoring of the fishery. In cooperation with the Seychelles Fisheries Authority, a pilot electronic monitoring project is underway with the industrial longline, purse seine, and semi-industrial fishing fleets. In addition, support from TNC's FishPath team is looking at new tools to identify improved fisheries harvest strategies in coastal fisheries including spanner crab and lobster fisheries.

Zone Methodology

Zone design management considerations were drafted in April 2015 and included general zoning challenges in Seychelles, zoning design considerations, and the initial zoning framework.

The Seychelles archipelago has two distinct geological features: 1) the inner islands (Mahé) group of 41 granitic islands (with hills and mountains), two coralline islands, and the outlying islands, and 2) the coralline group of 72 or more islands that are at, or slightly above, sea level. The SMSP zoning covers all the marine waters of

the Seychelles EEZ (including species, habitats, and ecological processes that support marine life), from 0–200 nautical miles, approximately, though the actual distance may be longer in some parts of the EEZ.

In Phase 1, the SMSP zones were coarse scale and focused on the offshore waters beyond the Territorial Sea (12 nautical miles from the high-water mark). New areas were added in Phase 2 and Phase 1 areas were expanded. Throughout the zoning design process, consultation and input by all stakeholders was received as per the SMSP Initiative governance framework and global best practices.

The Territorial Sea was interim Zone 2 for all of the waters of Seychelles except the waters surrounding Aldabra Atoll, which were already in a designated MPA category (Special Reserve), and the Port Boundary (Zone 3).

Detailed zone methodology is available in an Annex.

ZONING IN SEYCHELLES

In 2014, stakeholder workshops were held to identify challenges for zoning. These discussions highlighted key considerations for the planning team to be aware of and learn more about and, where possible, to address or incorporate into the zoning design process and proposals. These considerations included:

- integrate existing zones and/or management plans including the current marine protected areas and fisheries management zones or boundaries
- technical, legal, and political complexities of the multi-objective ocean zoning process
- competing interests with different or conflicting values attached to specific locations in the Inner and Outer Islands
- lengthy time horizons for formalising zones
- zoning for a dynamic ecosystem
- legislative tools to implement zones (e.g., laws, regulations)
- lack of legal flexibility
- property rights and resource ownership
- capacity to implement zones

ZONING DESIGN CONSIDERATIONS

In 2014, zoning design considerations were identified during stakeholder workshops so that zone areas would be compatible with values and goals for Seychelles ocean space. The design considerations included:

- Harmonise and integrate the zones designated or proposed under the existing and revised Fisheries Act and Protected Areas policy.
- Recognise the specific characteristics of each of the Outer Islands, e.g., those with lagoons, as well as the integration of sustainable tourism and artisanal fisheries.
- Consider ongoing uses and measures outside the Seychelles EEZ that may impact the ecosystems, species, processes, and uses within it.
- Use “best zones” instead of exclusion zones, as in “best use” areas.
- Highlight gaps in marine data, but do not be stalled by them.
- Reflect the practicality of managing zones given the size of the EEZ and the current limited capacity for both management and enforcement. This should be reflected in the management objectives.
- Consider potential future uses (such as renewable energy), climate change impacts, and ecosystems services, bearing in mind the lack of data and uncertainty surrounding these uses.
- Balance uses and priorities, including the overlapping of uses that can be achieved through effective stakeholder consultation that draws on inputs from the TWGs.
- Evaluate the benefits of no-take areas and fishery closures as management tools.

ZONING PROCESS

A multiple-step zoning process was proposed and discussed in 2014–2015 that included both spatial and non-spatial components. Geographic boundaries of zones were captured and the non-spatial management considerations for uses and activities within the zone were drafted and finalised. While the zoning process steps listed below appear sequential, it was an iterative process because the steps did not always progress linearly. For example, several steps were completed simultaneously, some steps were partially completed because information was missing or not available at a certain time, and some steps were repeated or revisited as new information became available or provided.

1. Review existing plans, literature, and guidelines for the Seychelles.
2. Review global "lessons learned".
3. Gather and review data layers for environment, existing human uses and activities, future potential uses and activities, cultural heritage, historical marine artifacts, governance and administration, and other sources relevant for the planning boundary.
4. Develop a zoning process.
5. Define the zoning scale and scope.
6. Draft zoning objectives.
7. Decide upon the zoning approach and develop names and types of zones.
8. Clearly articulate criteria for defining the spatial extents of the zones.
9. Develop spatial and non-spatial tools to support development of zones (e.g., compatibility matrix for uses and activities, web-based or interactive spatial tools to display data and sketch zone boundaries, Marxan or MarZone, Recommended Uses Table, definitions of marine uses and activities).
10. Analyse information and data for existing and future uses and activities.
11. Draft zones, with management objectives and directions for each zone.
12. Review and discuss with government, stakeholders, and the public.
13. Assess, review, and adjust zones and management directions.

The detailed methodology for the zoning process is available in an Annex. The following contains highlights or key points for Steps 1-2 and 5-7 of the aforementioned steps for a zoning process:

Step 1 - Review of existing plans, literature, and guidelines

One of the first steps in the zoning methodology was to inventory and map existing zones, boundaries, or areas and determine their locations, size, objectives, management plans, regulations, and any other information. Existing zones or boundaries in Seychelles include the Port of Victoria boundary, Port on Praslin, Port on La Digue, Fishing by Foreign Vessel prohibited areas (Table 3; fishing by foreign vessels prohibited), marine protected areas, terrestrial protected areas, Areas To Be Avoided by shipping, dredging exclusion boundary for fibre optic cable, sand dredging areas, reclamation areas, shipping approaches, port zones of influence, wind turbines in Victoria, and ferry routes.

All foreign-owned industrial fishing vessels are excluded from shallow water areas less than approximately 200 m depth as per Regulation 5 of the Fisheries Act (2012; Cap 82). Seychelles has also banned the use of spear guns and bottom trawling under the Fisheries Act and is developing and discussing new measures for sustainability.

Seychelles has existing maritime boundaries related to marine uses and activities as well as marine protected areas. Existing zones and boundaries that were added to the geodatabase, mapped, and described during stakeholder consultations included:

- existing protected areas
- fisheries exclusion areas for industrial fishing
- Areas To Be Avoided on nautical charts
- Port Fee Boundary
- PetroSeychelles voluntary exclusion zone

The information about existing zones, boundaries, and areas is important because it informed the zoning design in terms of meeting the marine protection area target of 30% (i.e., 15% in Phase 1 and 15% in Phase 2), management considerations, allowable activities, and key stakeholders that might be affected by any proposals that overlap or conflict with existing uses. This information also helped understanding of what percentage of Seychelles' waters were under existing management and/or have restrictions for certain activities. For example, the Foreign Fishing Restricted Areas comprise 118,897 km^2, or almost 9 percent of the Seychelles' ocean (Table 3); 40% of these areas overlap with the Territorial Sea including waters less than 200 m depth.

Table 3. Seychelles Foreign Fishing Restricted Areas within the EEZ (Source: Seychelles Fisheries Act 2014, Regulation 5; shown in red lines on charts ML/AND/73B).

Fisheries Act Zone #	Foreign Fishing Restricted Areas	Area (km^2)	% EEZ
1	Around Mahe Island and Seychelles Bank	63,891	4.7
2	Around Platte Island	2,377	0.2
3	Around Coetivy Island	2,950	0.2
4	Around Fortune Bank	2,406	0.2
5	Around the Amirantes Islands	17,285	1.3
6	Around Alphonse Island	2,799	0.2
7	Around Providence, Farquhar and St Pier, and Wizard Reef	14,897	1.1
8	Around Cosmoledo and Astove Islands	5,321	0.4
9	Around Aldabra and Assomption Islands	6,971	0.5
	TOTAL	**118,897**	**8.8**

Step 2 - Review Global Lessons Learned

The Seychelles MSP examined marine spatial plans from around the world including one of the oldest marine plan projects, the Australia Great Barrier Reef Protected Area Network. The SMSP core team asked for advice from other colleagues and engaged with the MSP listserves and groups for lessons learned. For example, staff from the Great Barrier Reef Marine National Park Authority and from Canada's Marine Plan Partnership for the North Pacific Coast (MaPP) suggested to a zoning framework that had no more than 3–5 zone categories.

Step 5 - Define zoning scale and scope

As noted in Chapter 2 for the scale and scope of the SMSP, the planning boundary and geographic scope were delineated from the mean high-water mark to the limits of Seychelles EEZ. The planning scope included all marine uses and activities except military activity, maritime security and safety, and anything in the air that did not touch the ocean's surface. All terrestrial areas are out of scope for the SMSP. Management considerations or conditions developed for SMSP zones in the Allowable Activities Tables codes may apply when land-based activities will or may impact the marine environment.

Step 6 - Zoning objectives

Developing general objectives for zoning clarifies the overall intention or purpose of developing new zones and new or revised management plans. These general objectives can be used during implementation to measure the performance or success of the plan to achieve the intended benefits of the MSP and assess what revisions or adaptations to the Plan are required during implementation. The benefits of zoning are many and include reducing spatial and temporal conflicts between existing and future uses, increasing business certainty, increasing business efficiencies for tenures, permits or licenses (e.g., reducing the time to obtain a permit), and protecting social, cultural, and ecological values or areas.

The general objectives for zoning in the Seychelles EEZ were:

- Identify 30% of the EEZ for new marine protected areas, half of which are fully protected.
- Identify climate change adaptation options and/or strategies.
- Identify management directions for all uses including allowable activities.
- Provide overall guidance for resource managers to increase business certainty and increase business efficiency in the Seychelles marine environment.
- Reduce spatial conflicts among existing and future uses, where possible.
- Identify areas for enhanced management for cultural, ecological, and social objectives.

Step 7 - Zoning approach

In addition to gathering stakeholder input on the proposals, the SMSP team consulted with Seychelles' maritime security, enforcement, and monitoring authorities as experienced mariners in Seychelles throughout the zoning design process for their insights and advice. Clear guidance was provided to the SMSP process to support successful implementation of the Plan when it was completed such as the following:

- use straight lines for zone boundaries, not arcs or circles
- no vertical zoning; a zone includes sea surface to seabed
- use WGS84 coordinates system in the GIS
- feasible for control, monitoring, and surveillance
- enforceable
- capture representative habitat features and/or species distributions
- avoid zones within zones
- no buffer zones; make the protection zone as large as is required for the biodiversity goal
- temporal, seasonal, and/or rotating zones could be considered during revision of the Plan

Zoning Framework

In 2014, five zone categories were proposed for a zoning framework to match the five themes of the SMSP: fisheries, biodiversity conservation, public utilities and infrastructure, non-renewable resources, and tourism and recreation. These five zone types were proposed to reflect the marine sectors in Seychelles and allocate space for their uses in coastal and offshore waters. Zone A: fishing and food security, Zone B: biodiversity, Zone C: industrial and public utilities, Zone D: non-renewable resources, and Zone E: tourism and recreation. Stakeholder preferences for these five zone types were identified based on stakeholder consultation, Marxan analyses (e.g., UNDP PA project), and spatial data sets from government agencies, academics, local experts, and published papers.

In March 2015, a revised SMSP zone framework was developed after stakeholder discussions and lessons learned shared from other geographies. Advice received suggested the creation of 3–5 zones in the zoning framework, and avoid zones within zones. The zoning design must also endeavour to maximise economic opportunities for existing and future activities in the remaining EEZ.

To simplify and improve the alignment of the zones with the alignment of the SMSP objectives (biodiversity protection, sustainable economic development, and climate adaptation), the revised Seychelles zoning framework contained three zone categories that i) address the 30% biodiversity protection goal (Zones 1 and 2), ii) address climate change adaptation (all zones), iii) support the development of the sustainable Blue Economy (all zones), and iv) support marine infrastructure and existing uses (all zones) (Table 4). For each zone category, a draft Allowable Activity Table was developed with associated documents such as the Master List of Definitions and documentation of the revisions and recommendations from stakeholders. Supporting the zoning framework and allowable activities development was the General and Area-based Management Considerations and the Master List of Definitions. The Master List of Definitions is essential to implement and enforce the Allowable Activities Tables.

Table 4. Seychelles MSP zoning framework with zone categories, name, objectives, and description.

Zone Category	Zone Name	Objectives of the Zone	Zone Description
Zone 1	High Biodiversity Protection Zone	To allocate 15% of the EEZ and Territorial Sea for high marine conservation and biodiversity goals, for representative habitats and species.	High biodiversity protection zones conserve and protect the top priority areas for marine and coastal biodiversity in Seychelles. These zones are designated for habitats and species that may be rare, endangered, unique or with narrow distribution ranges. This zone includes breeding or spawning areas, key foraging habitat, fragile or sensitive species and habitats, and internationally significant areas. When combined, these zones provide habitats and species with long-term protection, and are sufficiently large to ensure ecological resilience and climate change adaptation. This zone category is not suitable for extraction or seabed alteration.
Zone 2	Medium Biodiversity Protection and Sustainable Use Zone	To allocate 15% of the EEZ and Territorial Waters for medium marine conservation and biodiversity goals, for representative habitats and species. Sustainable uses are compatible with the biodiversity objectives in these areas.	Medium biodiversity protection and sustainable use zones are proposed to conserve areas that are suitable for medium levels of biodiversity protection and are also compatible with some sustainable uses. These zones include habitats and species that have some tolerance to disturbance and human activities. These zones also include regionally and nationally significant areas. This zone category is suitable for some level of extraction and seabed alteration, with appropriate management and direction, depending on the objective of each designated area.
Zone 3	Multiple Use Zone	To allocate 70% of the EEZ and Territorial Waters to maximise uses and activities in Seychelles, with development aligned with long-term sustainability of the natural resources.	Areas are identified for multiple uses and economic activity. These include high value and/or high priority areas for the marine sectors that use Seychelles waters for economic, social and cultural benefits.

ZONING MILESTONES

Phase 1 – Milestone 1

The Seychelles MSP Initiative engaged with stakeholders, local experts, and others starting in 2014 for the identification of areas to propose for Milestone 1 and the 15% goal. The discussions in Phase 1 identified what was in and out of scope and the zoning design that identified two new marine protected areas for the first SMSP milestone: 15% of the EEZ. It was important to note that:

- The Territorial Sea waters are some of the most well used waters within Seychelles and have the most complexity with respect to identifying new marine protected areas and allowable uses. In August 2015, it was agreed that except for waters surrounding Aldabra and Assomption Atolls, the Territorial Sea waters would not be discussed in Phase 1 and would be called "Interim Zone 2". For the purposes of Phase 1, the Territorial Sea waters were approximated by a 12-nm buffer from the high-water mark.
- By 2020, the Interim Zone 2 areas had 15% in Zone 1 High Biodiversity and 15% in Zone 2 Medium Biodiversity-Sustainable Use, including a proposal that this would include the waters surrounding the Inner Islands. However, this was later discussed in Phase 2 and stakeholder feedback and inputs strongly indicated very low support for any more marine protected areas in the Inner Islands.
- The management conditions and allowable uses were phased in for activities and uses. The existing agreements and activities were set in place through 2020 so as to phase in increased marine protections and sustainable uses. There were several existing agreements in Seychelles and these were taken into account in the zoning design, for example, the EU-Seychelles Fisheries Partnership Agreement.

A preliminary zoning design was proposed in April 2015 (titled "Map 1.1"). In June, a second version of a zoning design was proposed with 17 areas that reflected physical features (e.g., seamounts, canyons) and oceanographic processes (e.g., upwelling), as well as marine activities and uses (e.g., fishing, tourism, shipping). The SMSP used the "preferred" scenario from the UNDP Protected Area Expansion Project final report (Scenario 06; Klaus, 2015) and the zoning design was evaluated for capturing the goals for representation established through the PA process (see Klaus, 2015). Climate change threats (see Maina, 2011) were included in the preferred scenario as were some fisheries uses.

In June 2015, a revised zoning design (version 2.0) was presented and discussed with stakeholders and government. The SMSP process received comments and concerns June–December 2015. Revisions to this design were made and resolved issues with version 2.0 and a revised zoning design (version 2.2) was presented for consultations, input, and review in early 2016. At this same time, an SMSP Atlas was started to support the zoning design, view spatial activities, and provide information for benthic habitats and other spatial features relevant to planning to include biodiversity.

Zoning design 2.0 meets a target for 30% representation by area including 15% identified for high biodiversity protection (Zone 1) and 15% for medium biodiversity protection (Zone 2). Representation targets for biodiversity features are well met in this design, including for all key habitat types in deep and shallow waters: 61/94 marine features (65%) are captured for at least 100% of their goal; 9/94 (9%) have a > 50% shortfall; 24/91 (26%) are between 10–49% captured. The goals for representation ranged from 10–100%, based on experts to the GoS-UNDP-GEF PA project. The next steps included refining the zone areas to minimise impacts to other existing uses or activities and maximise the primary objective or emphasis of the zoned area. In addition, discussions included how to proceed in Phase 2 and refine the areas within the Territorial Sea (12 nautical miles from high water mark). Each zoned area included recommendations for allowable activities and uses, and management considerations for allowable activities. An Activities Table was drafted for each of the zone categories; the Activities Table needed more discussion, input, and review by government and stakeholders.

In October 2016, a revised map was developed based on a new analysis of biodiversity using Marxan with Zones. The results were reviewed with stakeholders at workshops and ground-truthed for accuracy using local and expert knowledge. Zoning Design version 3.0 was developed. This design was further refined in March 2017, based on input from October, notably switching Zone 1 and Zone 2 areas for Aldabra East and Aldabra

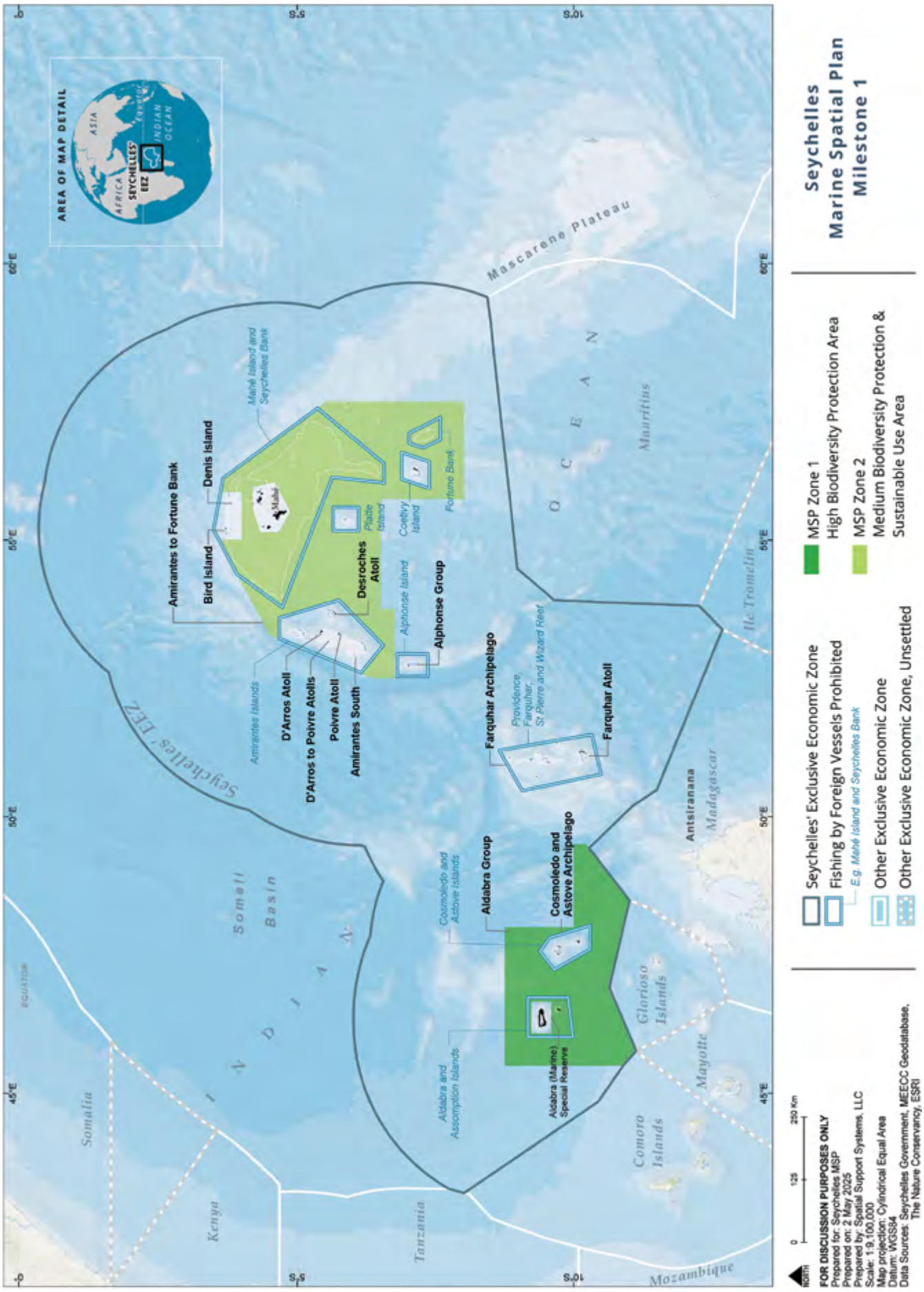
North. In addition, input received strongly recommended improving the design on the Mahé Plateau so as to make sure that navigation within and outside the zone was easiest for mariners and the marine sectors.

The nomination file for Milestone 1 was prepared for the MEECC in October – November 2017, submitted to Cabinet, and underwent a mandatory 28-day public review period. Milestone 1 comprised Aldabra Group (Marine) National Park (71,601 km^2; 5.3%) and Amirantes to Fortune Bank (Marine) Area of Outstanding Natural Beauty (136,753 km^2; 10.1%) (Table 1). Total protection for Milestone 1 was 208,354 km^2 or 15.4% of the ocean. The NPNCA did not have a sustainable use definition for protected areas and the AONB was a temporary category until the NPNCA was amended and Sustainable Use Area created.

The nomination files, including the descriptions, maps, and draft Allowable Activities Tables, were published on the SMSP website for viewing and download by stakeholders and civil society. The 28-day comment period included viewing of the documents at the Ministry office as per other MPAs in Seychelles history. The publishing of the information on a website was a first in Seychelles' history for marine protection or MPA designations process, typically the nomination files are available in-person only. The two new marine protection areas and were gazetted on 21 February 2018 by the Honourable Minister Didier Dogley of the MEECC (Map 3). An official signing ceremony took place at the Savoy Hotel with a reception that included high-level Seychelles government officials, SeyCCAT and TNC representatives, SMSP committee members, media, and other distinguished guests and stakeholders.

Table 5. Milestone 1 draft MSP Zoning Design version 4.0 for Nomination File, October 2017, no land.

Area #	Zone Category	Area (km^2)	% EEZ
13	Zone 1: Aldabra Group (Marine) National Park	71,601	5.3
6	Zone 2: Amirantes (Marine) to Fortune Bank (Marine) Area of Outstanding Natural Beauty (AONB)	136,753	10.1
	Total: Zone 1 and Zone 2	**208,354**	**15.4**
1	Zone 3: Central Mahe Plateau	5,475	0.4
17	Zone 3: Offshore Waters	1,134,973	83.95
	Total: Zone 3	**1,140,448**	**84.35**
	Existing Protected Areas (Inner Islands, Aldabra (Marine) Special Reserve)	2,577	0.19
	Total: All Zones	**1,351,379**	**99.9**



Map 3. Milestone 1 reached 15.4% and 208,354 km² in new marine protection areas and the two areas were gazetted on 21 February 2018 (zoning design 4.0).

Phase 2 – Milestone 2

Phase 2 included Milestones 2 and 3 and expanded marine protections from 15% to more than 30%. Phase 2 differed from Phase 1 in that discussions included the shallow waters inside the Territorial Sea boundary. Importantly in Phase 2 was the support to government to finalise the basepoints and officially gazette the Territorial Sea boundary.

In early 2017, Phase 2 was launched to completed Milestones 2 and 3. Building from zoning design 4.0, additional areas were proposed to meet the next milestone of 22.5% in marine protection.

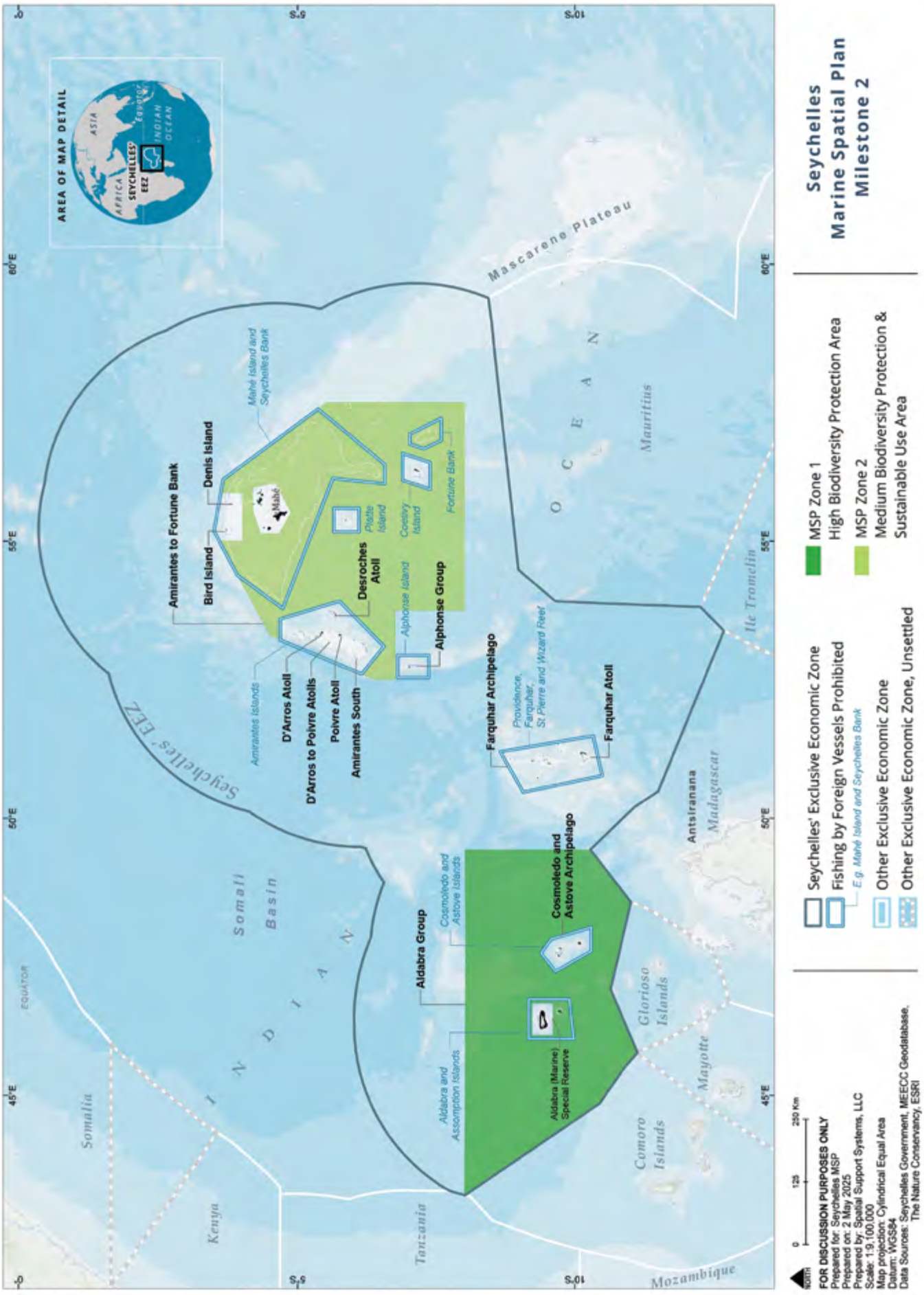
More than 15 areas were under consideration and the GIS decision support tools were made more advanced so that biodiversity representation statistics could be summarised with any changes to zoning designs and areas. The stakeholder consultations led to high support to expand the Aldabra Group (Zone 1) and the Amirantes to Fortune Bank (Zone 2). The Aldabra Group revised design was informed by discussions with the Seychelles Coast Guard, the National Information Sharing and Coordination Centre (NISCC) and the Regional Coordination Operations Centre (RCOC) so that monitoring and enforcement during implementation would be successful. The design principles for straight lines were employed for both areas and configured with consideration of the EEZ boundary shape.

Discussions included the Zone 3 areas, the 70% of ocean that would not be in marine protection areas. The key decisions in 2018 resulted in not including any of the industrial fishing exclusion areas in the zoning design except for most of the Mahé Plateau and the Aldabra Group (which included Assomption); Assomption was gazetted as a Zone 1 area in Milestone 2. This was an exception to the general guidance to this point, which was to not gazette any of the waters inside the estimated Territorial Sea 12-nm boundary.

The nomination file for Milestone 2 was prepared for the MEECC in January – February 2019, submitted to Cabinet for approval, and underwent a mandatory 28-day public review period. The marine protection areas were nominated for protected area status under the National Park and Nature Conservancy Act (NPNCA). The nomination files, including the descriptions, maps, and draft allowable activities tables, were published on the SMSP website for viewing and download by stakeholders and civil society as per Milestone 1. The comment period included viewing of the documents at the Ministry office as per other protected areas in Seychelles history. The two marine protection areas were expanded from Milestone 1 and now totalled 350,903 km^2 and covered 25.95%, without land (Table 6; Map 4). With land, the areas totalled 26.2% of the EEZ. The areas were gazetted on 15 April 2019 by the Honourable Minister Wallace Cosgrow of the MEECC. This same process was followed for Milestone 3.

Table 6. Milestone 2 draft MSP Zoning Design version 4.3, no land. Existing Protected Areas include Aldabra (Marine) Special Reserve and all protected areas in the Inner Islands. Also includes African Banks Protected Area.

Area #	Zone Category	Area (km^2)	% EEZ
13	Zone 1: Aldabra Group (Marine) National Park	177,435	13.12
6	Zone 2: Amirantes (Marine) to Fortune Bank (Marine) Area of Outstanding Natural Beauty	173,468	12.83
	Total: Zone 1 and Zone 2	**350,903**	**25.95**
1	Zone 3: Central Mahe Plateau	5,475	0.4
17	Zone 3: Offshore Waters	992,422	73.4
	Total: Zone 3	**997,896**	**73.8**
	Existing Protected Areas (Inner Islands, Aldabra (Marine) Special Reserve)	2,577	0.19
	Total: All Zones	**1,351,379**	**99.9**



Map 4. Milestone 2 reached 26% and 350,903 km² in new marine protection areas and the two areas were gazetted on 15 April 2019 (zoning design 4.3).

Phase 2 – Milestone 3

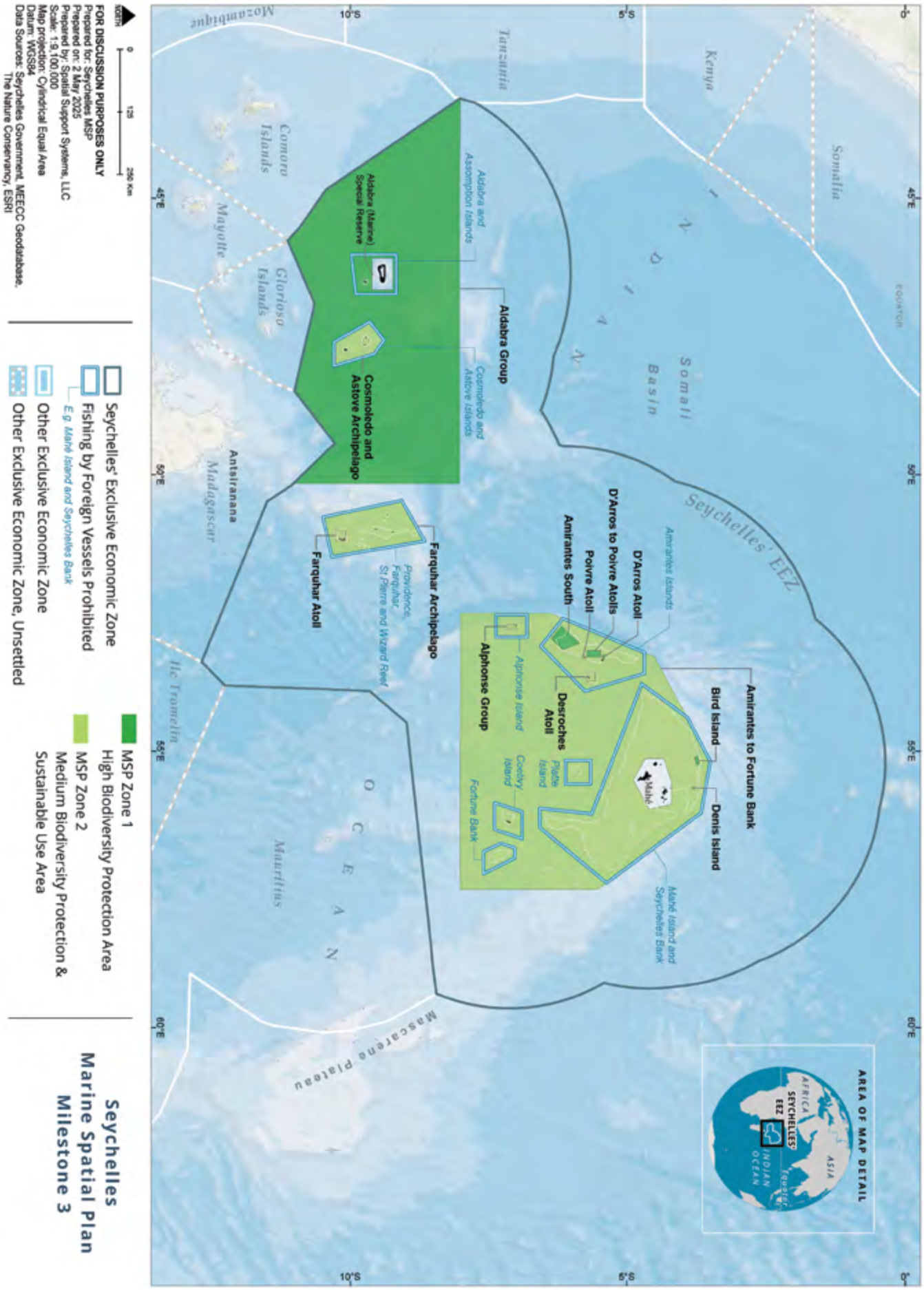
The final step in the zoning design, Milestone 3, took place in 2019. Consultations were held to discuss expanding protections from the zoning design in Milestone 2 to the final Milestone and 30%. In this Milestone, discussions included developing the Allowable Activity Table for Zone 3. All of the remaining proposed areas for biodiversity protection were discussed, including Assomption Island which was gazetted in Milestone 1 with Aldabra Group (Marine) National Park.

Stakeholder discussions, including with the Seychelles Coast Guard and Seychelles Maritime Safety Authority (SMSA), highly favoured a design that had fewer and larger areas to achieve the more than 410,000 km^2 protection goal rather than numerous small areas. There was very high support to not add any more marine protection areas to the Inner Islands, a recommendation from stakeholders that was consistently heard since 2014. Discussions centred on the shallow water areas of the major archipelagos and island groups including to expand the size of marine protections to the Amirantes Group and Aldabra Group with representation of key species and habitat types. Discussions with the local semi-industrial and artisanal fisheries sectors highlighted the need for a zoning design that would allow for sustainable fishing in shallow waters near Mahé and in the Outer Islands.

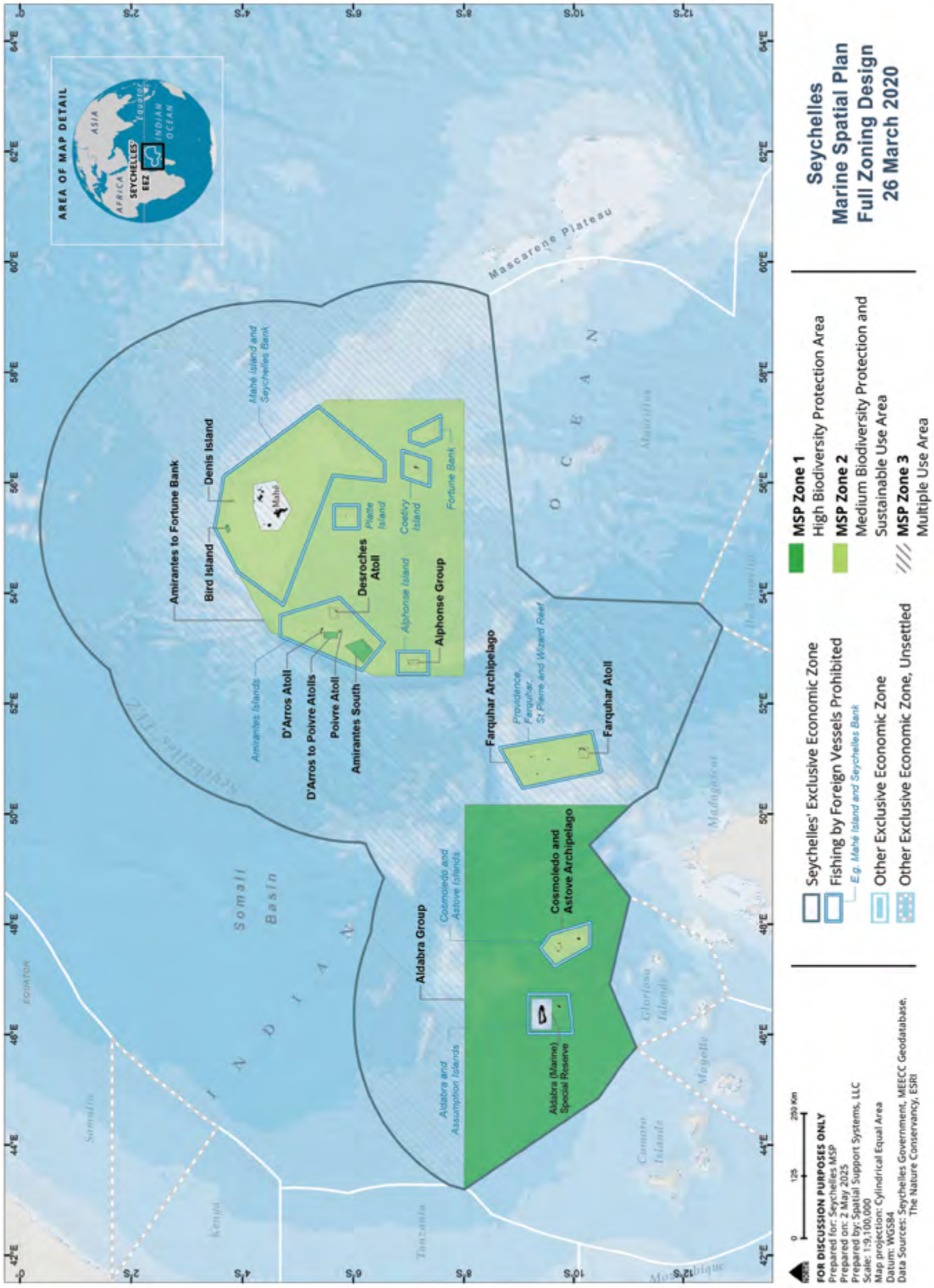
The nomination file for Milestone 3 was prepared for the MEECC in October–November 2019, submitted to Cabinet for approval, and underwent a mandatory 28-day public review period. The two marine protection areas were expanded from Milestone 2 and 11 more areas were added to the nomination file. Thirteen areas covering 441,446 km^2 and 32.65% of the EEZ were approved and gazetted on 26 March 2020 by the Honourable Minister Wallace Cosgrow of the MEECC (Table 7, Maps 5 and 6). The signing ceremony occurred at the State House during the COVID-19 global pandemic, with limited attendance.

Table 7. Seychelles Milestone 3 areas and other MPAs, with no land (June 2024). Areas in Zone 2 were re-classified from NPNCA Areas of Outstanding Natural Beauty to NRCA Sustainable Use Areas in July 2023. Existing Protected Areas include Aldabra (Marine) Special Reserve and all MPAs in the Inner Island and African Banks Protected Area.

Area #	Zone Category	Area (km²)	% EEZ
1	Bird Island (Ile aux Vaches) (Marine) National Park	105	0.008
2	D'Arros Atoll (Marine) National Park	23.4	0.002
3	D'Arros to Poivre Atolls (Marine) National Park	370	0.027
4	Amirantes South (Marine) National Park	1,334	0.1
5	Aldabra Group (Marine) National Park	201,224	14.88
	Total: Marine National Parks (Zone 1)	**203,057**	**15.02**
1	Amirantes (Marine) to Fortune Bank (Marine) Sustainable Use Area	217,577	16.1
2	Denis Island (Marine) Sustainable Use Area	29.6	0.002
3	Desroches Atoll (Marine) Sustainable Use Area	329	0.024
4	Poivre Atoll (Marine) Sustainable Use Area	54	0.004
5	Alphonse Group (Marine) Sustainable Use Area	213	0.016
6	Farquhar Archipelago (Marine) Sustainable Use Area	14,478	1.07
7	Farquhar Atoll (Marine) Sustainable Use Area	408	0.03
8	Cosmoledo and Astove Archipelago (Marine) Sustainable Use Area	5,310	0.39
	Total: Marine Sustainable Use Areas (Zone 2)	**238,398**	**17.6**
	Total: Zone 1 and Zone 2	**441,456**	**32.65**
	Existing Protected Areas (Inner Islands, Aldabra Marine Special Reserve)	2,577	0.19
	Total: All marine protection areas	**1,351,975**	**32.84**
1	Inner Islands Multiple Use Area	5,475	0.4
17	Deep Water Multiple Use Area	901,862	66.7
	Total Zone 3	**907,336**	**67.11**
	Total: All Zones	**1,351,975**	



Map 5. Milestone 3 reached 32.6% in marine protection areas and was gazetted on 26 March 2020 (zoning design 5.45).



Map 6. Seychelles Marine Spatial Plan zoning design, all zones and all areas, as per Milestone 3, gazetted on 26 March 2020 and in effect with the SMSP regulations on 31 March 2025.

REPRESENTATION

The Seychelles ocean is 1,351,975 km^2, which is the total of the EEZ, Territorial Sea, and Archipelagic Waters. Most of Seychelles (96.3%) is water deeper than 200 m (1,301,147 km^2). Shallow waters are less than or equal to 200 m and comprise just 3.7% of Seychelles' ocean (50,628 km^2). Zone 1 areas are 15.5% of all deep waters and 2.8% of shallow waters, and Zone 2 areas are 15.0% of deep waters and 85.2% of shallow waters (Table 8).

Table 8. Area and percentages of all maritime areas in shallow and deep waters, Seychelles.

Maritime Area	Area (km^2)	% of all maritime waters	% of all waters in Zone 1	% of all waters in Zone 2
All maritime areas	1,351,975		15.02	17.6
Total shallow (0 – 200 m)	50,628	3.7%	2.8	85.2
Total deep (greater than 200 m)	1,301,147	96.3%	15.5	15.0

More than 99% of Zone 1 is in deep water, with only 0.7% in shallow water, whereas Zone 2 is about 82% in deep water and 18% in shallow water. Combined, the Zone 1 and 2 areas are 90% deep water and 10% shallow water (Tables 9 and 10).

Table 9. Summary of the marine protection areas in the 1,301,147 km^2 of deep waters (greater than 200 m) in the Seychelles EEZ.

Zone Category	Area (km^2)	% EEZ	% in deep water	Zone as a % of all deep water
SMSP Zone 1	203,057	15.03	99.3	15.5
SMSP Zone 2	238,398	17.6	81.9	15.0
SMSP Zone 1 and 2	441,456	32.6	89.9	30.5
Aldabra (Marine) Special Reserve	2,231	0.16		
Other MPAs	64.8	0.004	0	0
All Marine Protection Areas	**444,033**	**32.8**	**88.8**	**29.9**

The shallow water marine protections overlap with many conservation features and two that are often of interest are seagrasses and coral reefs. The Zone 1 areas cover about 3% of all seagrasses and 6% of all coral reefs while the Zone 2 areas far exceeded the 15% goal and cover 81% and 80%, respectively. Across all MPAs, 85% of seagrasses and 97% of coral reefs are in protected areas. Additional representation summaries and statistics are in an Annex.

Table 10. Summary of the marine protection areas in the 50,628 km² of shallow waters (0-200 m) in the Seychelles EEZ.

Zone Category	Area (km²)	% in shallow water	Zone as % of all shallow water	% of total Seagrass area	% of total Corals Reef area
SMSP Zone 1	1,421	0.7	2.8	3.3	5.7
SMSP Zone 2	43,158	18.1	85.2	80.9	79.3
SMSP Zone 1 and 2	44,579	10.1	88.0	84.3	85.0
Aldabra (Marine) Special Reserve	831	33.1	1.5	0.6	12.2
Other MPAs	61	94.1	0.15	0.16	0.62
All Marine Protection Areas	**49,863**	**-%**	**88.7**	**84.9**	**97.4**

The total number of conservation features per area ranged from 0 to the maximum number for each of the high-level feature categories—habitats, species, foraging distributions, breeding distributions and expert layers (Table 11). Additional categories include dugong, fish spawning sites, and historical cetacean distribution, and are found in an Annex.

Table 11. The number or presence of conservation features found within each Zone 1 and Zone 2 area. Biodiversity conservation features are from the GoS-UNDP-GEF report (Klaus, 2015).

SMSP Zone Area	Total Feature Count	Deep Features	Shallow Features	Marine Birds	Whales/ Dolphins	Seagrass	Turtle Foraging & Nesting	Wetland & Mangrove	IBA & WIOMER
Feature Count	82	15	28	9	13	4	7	1	2
Zone 1									
Bird Island	38	1	4	9	9	Yes	Yes	No	Both
D'Arros	40	0	5	9	11	Yes	Yes	No	Both
D'Arros to Poivre	39	0	7	9	11	Yes	Yes	No	Both
Amirantes South	45	3	8	7	11	Yes	Yes	No	Both
Aldabra Group	46	10	3	6	14	Yes	Yes	No	Both
Zone 2									
Amirantes to Fortune Bank	72	15	18	9	12	Yes	Yes	Yes	Both
Denis Island	33	0	3	7	8	Yes	Yes	No	Both
Desroches	40	2	5	6	11	Yes	Yes	No	Both
Poivre	41	1	7	6	11	Yes	Yes	Yes	Both
Alphonse Group	38	1	4	6	10	Yes	Yes	Yes	Both
Farquhar Atoll	43	2	4	7	13	Yes	Yes	Yes	Both
Farquhar Archipelago	52	9	6	8	13	Yes	Yes	No	Both
Cosmoledo and Astove	45	6	4	5	13	Yes	Yes	Yes	Both
Zone 3									
Inner Islands	39	2	6	9	5	4	7	1	2

The SMSP Milestone 3 zoning design plus other MPAs achieved the 30% representation goal for all but eight of 86 features (9%) in the spatial database. Only five conservation features were less than 20% and none were less than 10% (Table 12). The SMSP consultations discussed the importance of all conservation features during the zoning design process and only the "island-fringing reef" may be a feature to examine during implementation because more than 85% of this feature is outside protected areas.

Table 12. The list and summary of conservation biodiversity features that were short of the 30% representation goal in the SMSP Milestone 3 zoning design (v. 5.45). Biodiversity conservation features are from the GoS-UNDP-GEF report (Klaus, 2015).

Conservation feature	% representation in all MPAs	% representation in Zone 1 and Zone 2	% representation other MPAs and Aldabra Special Reserve
Atoll raised lagoon	100	25.2	74.8
Wetlands and mangroves	90	10.4	79.5
Abyss (> 6,000 m)	27.3	27.3	0.004
Frigatebird foraging	24.5	24.2	0.3
Abyssal hills (300–1,000 m)	20.7	20.7	0
Sperm whale historical extent	19.8	19.8	0
Trench (Amirante)	15.9	15.9	0
Spreading ridge	15.7	15.7	0
Rift valley	15.6	15.6	0
Island-fringing reef	12.8	0	12.8
Summary	**Number of features (% of total)**	**Number of features Zone 1 and 2**	**Number of features in all MPAs**
Features with < 30% representation	8 (9%)	10	8
Features with < 20% representation	5 (5.8%)	6	8
Features with < 10% representation	0	1	7

TRADE-OFFS IN THE ZONING DESIGN

The guiding principles for the SMSP were important for the development of the zoning design proposals. Proposals were initially developed using all available data to examine habitat and species distributions and patterns and spatial representations of marine uses and activities. Some of the trade-offs that were discussed and agreed to or supported during the SMSP process include:

- PetroSeychelles provided three Areas of Interest (AOI) to the SMSP process. These areas came from the PetroSeychelles Atlas and included the Mahé Plateau to Mascarene Plateau, Farquhar Archipelago, and north of the Aldabra Group. During the discussion of expanding the Aldabra Group Marine National Park boundary in Milestone 2, the guyot habitat feature north of Aldabra Group was identified as a key feature for biodiversity representation. During the consultations, the Aldabra AOI was removed from the PetroSeychelles list to allow for the expansion of the Aldabra Group Marine National Park. This voluntary removal of a petroleum AOI removed 16,111 km^2 and reduced their overall footprint within the EEZ by 4%.
- A consideration related to trade-offs within the fisheries sectors was in part informed by relationships among the fisheries. For example, the Mahé Plateau drop-off areas were proposed as Zone 1 areas in the original zoning design in Phase 1. The purpose was to expand protection for the upwelling areas along the Plateau and develop new protection areas that crossed from the Plateau to the deep water, as per a design principle that was recommended for shelf habitats to ensuring functional ecosystems and marine productivity. The early designs for the 30% marine protection goal included proposed areas for Zone 1 within the drop-off habitats in several locations along the perimeter of the Mahé Plateau. These proposals would primarily impact small-scale and artisanal fisheries because the semi-industrial fishery representatives indicated that they voluntarily do not fish on the Plateau to not compete with the artisanal fishery, the latter of which has a limited range from Mahé, Praslin, and La Digue. The trade-off discussions with artisanal fisheries on the Mahé Plateau included an early decision for no new protection areas within the Inner Islands and interest for exploring new protection areas on the Plateau particularly to protect spawning or aggregation sites.

- The industrial pelagic longline fishery compromised on their fishing areas and preferred that the fully protected areas for Zone 1 were as consolidated as possible within the planning boundary. The preference was to avoid the waters near the Mascarene Ridge over the western EEZ.
- The Coco de Mer seamount ridge was proposed as a Zone 1 area to protect species using the seamount ridge. The ridge extends within and outside the Seychelles EEZ. This is an important fishing location for the semi-industrial fishery for target catch of long-tail snapper (*Etelis carbunculus*) and is also somewhat important for the industrial purse seine fishery. The Coco de Mer seamount is in Zone 3 in the final zoning design.
- The SE corner of the EEZ includes the northern tip of the Mascarene Plateau and connections to the Seychelles-Mauritius Joint Management Area (JMA). A new Zone 1 was proposed within the EEZ and along the planning boundary with the JMA to increase protection for seagrass beds and for management connections to uses and activities in the JMA. The discussions involved reviewing uses and priorities for pelagic longline and purse seine fisheries, non-renewable energy, maritime security, and the maritime boundary committee. The trade-offs involved discussions of feasibility for enforcement given Zone 1 proposals in other areas of the EEZ plus alternate locations for the priority uses and activities by key stakeholders. The stakeholder preference was to consolidate Zone 1 areas in the western EEZ in support of the Blue Economy, with an extension of the Zone 1 area in Milestone 1 to include more seamount features.
- A pelagic zone was proposed as a Zone 1 area for protection of pelagic species and to serve as a baseline for measuring benefits of marine protection. This proposal had very low support during the zoning milestones.
- Marine charters, sport fishing, artisanal fishing, and semi-industrial fishing were active participants throughout the zoning process including discussions for the Amirantes Group in Milestone 3. Initially, there was low support for any Zone 1 protections in the Amirantes but ecological and MPA criteria information was presented emphasizing the need to have replication across the 115-island archipelago, especially for shallow water habitats, and concerns for climate change risks such as sea surface temperature increases. Stakeholders in the Technical Working Groups also explained the high biodiversity values within the Amirantes Group and under-representation of protection for key habitats and species. The artisanal and semi-industrial fisheries, including for sea cucumber, reviewed data and provided key inputs on priority areas or fishing locations during TWG and SC meetings in 2019. The sector representatives agreed with other stakeholders on a compromise if the waters in the northern half of the Amirantes were Zone 2 because it was closer to the Mahé and that Zone 1 areas would be focused in the middle and southern waters of the Amirantes. Sea cucumber fishing locations (2003–2012; Seychelles Fisheries Authority) and sports fishing priority areas along the drop-off were among the key Blue Economy considerations for Zone 1 areas on the Amirantes as well as the biodiversity data, breeding colonies, and locations identified by the climate change risk mapping analysis as persistently cool ‘climate refugia’. This discussion was one of the more in-depth during the SMSP process because of the number of key stakeholders and priority areas, considerations for impacts to livelihoods, and interest to protect key biodiversity features including habitats that support economic activities.
- The initial shape or design of the draft Bird Island Zone 1 area centred the island within the protection area. This design was changed after consultation with stakeholders and with inputs from the island owners indicated that Silhouette Bank and the drop-off were key Blue Economy fishing areas for sport fishing and artisanal.

Allowable Activity Tables

Allowable Activity Tables are an integral component of a zoning framework and zoning designs, providing the management direction and information for marine users on what is allowable and where. These tables are one of the key outcomes of the Seychelles MSP and are essential to support effective management of zone areas during implementation. As is the case for all of the SMSP outputs, the management of the activities is guided by all relevant authorities and their mandates.

The first iteration of the Allowable Activities Table was in April 2015 for Milestone 1. This initial draft was a single table that listed key uses and activities in relation to the protected area categories in the NPNCA. These activities were coded at a high level in relation to conditions or restrictions in existing legislation and/or regulations and the relevant authorities. The subsequent tables were built from this reference point. Each review of the draft zoning designs was accompanied by reviewing the draft Allowable Activities Tables. There was a minimum of 25 consultations to discuss the Allowable Activities Tables between 2015 and 2024 (Table 13). These discussions included whether or not stakeholders thought it was important or necessary to have separate tables for any

specific areas within the zoning design. For example, it was proposed to have separate tables (or columns) for the Aldabra Group MNP (Zone 1), Denis Island (Zone 2), and St Joseph Atoll (a proposed management unit in Zone 2). The rationale for separate tables or columns was to discuss different conditions for uses and activities such as restrictions to some uses that may not be relevant or significant in other areas within the same zone category.

Decision-making to develop the Allowable Activities Tables and all associated documents followed the governance structure and iterative decision-making framework of the SMSP. The TWG and SC met and discussed issues, concerns, and suggested revisions during stakeholder consultations. As per the SC role, they would finalise their review and make a recommendation to the EC for changes and revisions to the tables and documents. The EC discussed the SC recommendation(s) and either accepted or approved, or reverted with a request for additional information.

ALLOWABLE ACTIVITIES TABLE CODES

The Allowable Activity Table (AAT) Codes for the Zone areas were identified through the SMSP Initiative (2014-2023) and approved on 20 May 2024. The Codes in this table apply to the superscript numbers in all of the Allowable Activities Tables (AAT) for the SMSP zoning design. Coding comes from legislation, regulations, scientific studies, government reports, unpublished studies, expert advice, and/or best available information. Stakeholders have developed and refined the restrictions and codes, starting in 2015. See also the General and Area-based Management Considerations and the Master List of Definitions.

Code #	Codes for Allowable Activities Tables
1	See General and Area-based Management Considerations. Approved management plans needed for Zone 1 and Zone 2 areas including Environmental Impact Assessment (EIA) and/or Environmental and Social Impact Assessment (ESIA), where applicable or required. Development proposals require a transparent and participatory process with all stakeholders.
2	For subsistence fishing, the management plan for the area will provide direction on the meaning of, the conditions, and definition of the activities it would apply to, noting the intent of subsistence fishing for persons residing on the islands. Subsistence fishing would be allowable for residents of Outer Islands. The details of subsistence fishing can be done at the technical level alongside or after the MSP is approved. Quotas and monitoring of all species harvested is required. Sustainable yield would need to be determined in a Zone 1 (SFA). Definition and regulations of subsistence fishing are as per the Seychelles Fisheries and Aquaculture Bill 2025 and regulation(s). See also notes in General Management Considerations.
3	Anchor in designated areas and/or use permanent mooring buoys as required by legislation, regulation, management plans or policy, and/or where practical.
4	Restrictions may apply to avoid or minimise disturbance on key species and ecological functions. For fisheries activities, see relevant legislation, regulations, and agreements for restrictions on target and non-target species.
5	Authorised approved permit and/or licenses are required for research and monitoring activities, where applicable.
6	Restrictions or prohibitions on fishing gear or technique may apply. Catch and release may be required, depending on species targeted. Some techniques may be prohibited, such as popping. Fishing in accordance with bag limits, catch limits, rod limits, and other gear or catch or fishing effort restrictions found in laws, regulations, policies, management plans, or international conventions and agreements. Reporting requirements, catch & release requirements, bans on discards, bans on retention, handling of species, best practices such as catch & release guidelines by the National Oceanic and Atmospheric Administration (NOAA), the Indian Ocean Tuna Commission (IOTC) Resolutions, and the International Seafood Sustainability Foundation (ISSF) criteria.
7	All vessels conducting seismic surveys must have necessary functioning acoustic equipment and adequately trained operators to detect the presence of cetaceans to always avoid and minimise detrimental effects during operations in accordance with strict, international published scientific guidelines for minimising disturbance to cetaceans (e.g., JNCC) Guidelines for Marine Mammals, 2017).

8	For non-renewable and bioprospecting activities, exploration and development phases must adhere to strict standards for the sector, incl. health, safety, and environment. Petroleum activities must comply with PetroSeychelles Model Petroleum Agreement.
9	Motorised devices and motor watercraft (jet skis) are prohibited in all SMSP Marine National Parks (Zone 1) and in the Desroches, Poivre, Alphonse, and Farquhar Atoll SMSP Marine Sustainable Use Areas (Zone 2; see Outer Islands Project), except where authorised for research, essential access and/or infrastructure, enforcement, safety, and/or rescue. See the SMSP Master List of Definitions for motor watercraft and motorised devices. Motor watercraft (jet skis) are conditionally allowable in the remaining SMSP Zone 2 areas: they must meet the details on specifications that are allowable in SMSP Zone 2 and only operate in the allowable location(s), outside a lagoon and shallow waters, included in the SMSA regulations and/or Marine Sustainable Use Area management plans. Motor watercraft (jet skis) should not operate within reef zones 150 m from highwater mark as per international best practice. All other motorised devices are prohibited in Zone 2.
10	No activity on Fish Aggregating Devices (FADs) and/or instrumented buoys by supply vessels except recovery. Authorisation required from SFA.
11	The type and extent of activities offered by a Hire Craft licence may be limited, depending on the area objectives.
12	In compliance with Seychelles, legislation, regulations, policies, management plans, agreements, and harvest strategies for fisheries monitoring. Fisheries monitoring includes, and is not limited to, human observers, electronic monitoring systems (EMS), vessel monitoring systems (VMS).
13	Only for essential access and/or essential infrastructure for the zone, including enforcement, safety and/or rescue. Considerations for essential access and infrastructure development include emergencies and whether an activity has fewer known impacts to the marine environment than to the terrestrial environment.
14	In compliance with Seychelles, legislation, regulations, policies, management plans, agreements, and harvest strategies for FAD management. FAD management includes, and is not limited to, authorisation given by SFA, no unauthorised deployment of FADs, and information to SMSA for anchored FADs
15	In accordance with the Seychelles Aquaculture Master Plan, Seychelles Aquaculture Policy, and other relevant legislation, regulations, policies, management plans, agreements, and strategies.

Table 13. Summary of the consultations and workshops that revised and/or made decisions for the Allowable Activities Tables and associated documents, in support of the SMSP zoning designs.

Meeting Dates	Map Versions	Description or Discussion
21 Apr 2015	0.1	Milestone 1 – existing legislation regulations
23 Apr 2015	0.1	
28 Apr 2015	1.1	Milestone 1 – Zone 1; draft versions
2 Jun 2015	2.0	
8 Jun 2015	2.0	
13 Aug 2015	2.0	
23 Sep 2015	2.0 – 2.2	
29 Sep – 7 Dec 2015	2.0 – 2.2	
20 Dec 2015	3.0	Zone 1 and Zone 2
25 Mar 2017	3.0	
11 May – 26 Sep 2017	3.0 – 3.1	
28 Sep – 12 Oct 2017	3.1 – 3.2	
5 Jun – 6 Jun 2018	4.0	Milestone 2 – Zone 1 and 2; draft versions
26 Sep – 11 Oct 2018	4.1	Zone 1, Zone 2, Codes
26 Oct – 2 Nov 2018	4.3	Zone 1, Zone 2, Codes, General Management
27 Jun 2019	N/A	Existing legislation documented for each activity
16 Jul 2019	5.2	Milestone 3 – Zone 1 and 2; draft versions
23 Sep 2019	5.4	Zone 1 plus Aldabra Group; Zone 2; Zone 3; Codes
22 Oct 2019	5.4	Zone 1, Zone 2, Codes, General Management
14 Nov 2019	5.45	Milestone 3 Nomination File
23 Sep 2021	5.45	Considered Fisheries and Tourism tables
15 Jul – 22 Jul 2022	5.45	Considered Zone 1: Aldabra; Zone 2: Denis, St Joseph tables
17 Nov – 22 Nov 2022	5.45	Decision on sub-tables; discussion to finalise 3 tables
15 Mar – 22 Mar 2023	5.45	Discussion subsistence fishing (Zone 1); jet skis (Zone 2)
6 Jun – 27 Jun 2023	5.45	Subsistence fishing (Zone 1); jet skis (Zone 2)
12 Apr 2024	5.45	EC #48 for approval (jet skis, subsistence fishing)
20 May 2024	5.45	EC #49 – approved

The Allowable Activity Tables and associated documents (Codes, Tables, General and Area-based Management Considerations, and Master List of Definitions) were approved by the Executive Committee in May 2024. The Master List of Definitions may be updated when definitions change in the Fisheries Act or other Acts in Seychelles that are undergoing revisions and approvals.

Monitoring the uses and activities in the Allowable Activities Tables will be an essential component of implementation of the SMSP.

ALLOWABLE ACTIVITIES TABLE – ZONE 1

Allowable Activities Table (AAT) for the Zone 1 areas identified through the SMSP Initiative (2014 – 2025)

Legend: A – Allowable; C – Conditional; X – Prohibited. See Codes for superscript numbers. General and Area-based Management Considerations apply to all activities. See Master List of Definitions for marine activities.

Sectors	Marine Activity *(Definition in Master List)*	Zone 1
Fisheries	*Aquaculture Operational*	*X*
	Aquaculture Restorative	*C 1,3,4,5,9,15*
	Artisanal Fishing (Small-scale Fisheries)	*X*
	Fly Fishing, blue water	*X*
	Fly Fishing, lagoon	*X*
	Industrial Pelagic Longline	*X*
	Industrial Purse Seine, free schools	*X*
	Industrial Purse Seine, associated schools	*X*
	Industrial Purse Seine, supply vessels	*C 1,4,10*
	Recreational Fishing	*X*
	Semi-industrial, hand gathering (Small-scale Fisheries)	*X*
	Semi-industrial, hook & line (Small-scale Fisheries)	*X*
	Semi-industrial, longline (Small-scale Fisheries)	*X*
	Sport Fishing	*X*
	Subsistence Fishing	*C 1,2,4,6,9*
Maritime Infrastructure	*Ballast Water and Bilge Dumping*	*X*
	Beach Replenishment	*X*
	Bunkering at Sea	*X*
	Bunkering at Sea, fishing vessels	*X*
	Coastal Dredging and Dredge Spoils	*C 1,4,13*
	Commercial Shipping	*C 1,4*
	Desalination, boat-based	*C 1,4*
	Desalination, land-based	*C 1,4*
	Disposal, Dumping	*X*
	Ferries and Transportation	*C 1,3,4*
	Ports, Marinas, Wharves, Jetties	*C 1,4,13*
	Reclamation	*X*
	Renewable Energy, deep water thermal	*X*
	Renewable Energy, solar marine	*X*
	Renewable Energy, tidal	*X*
	Renewable Energy, wave	*X*
	Renewable Energy, wind offshore	*X*
	Structures, marine other	*C 1,3,4,13*
	Underwater Cables	*C 1,4,13*
Non-renewable & Prospecting	*Bioprospecting Development*	*X*
	Mining, deep-sea	*X*
	Mining, sand	*X*
	Mining, shallow	*X*
	Petroleum Exploration, Drilling	*X*
	Petroleum Development, Production, Extraction	*X*
Tourism & Recreation	*Anchorages and Mooring Buoys*	*C 1,3,4*
	Cruise ship	*C 1,3,4,9*
	Motorised Activities, commercial	*C 1,3,4,9,11*
	Motorised Activities, non-commercial	*C 1,3,4,9*
	Non-Motorised Activities, commercial	*C 1,3,4,11*
	Non-Motorised Activities, non-commercial	*C 1,3,4*
	Tourism Accommodation, terrestrial	*C 1,4*
Research & Monitoring	*Aquaculture Research*	*C 1,3,4,5,9,15*
	Bioprospecting Research	*C 1,3,4,5,9*
	Hydrographic Surveys	*C 1,3,4,5,9*
	Scientific Geophysical Surveys and Research	*C 1,3,4,5,7,9*
	Scientific Research and Monitoring	*C 1,3,4,5,9*

ALLOWABLE ACTIVITIES TABLE – ZONE 2

Allowable Activities Table (AAT) for the Zone 2 areas identified through the SMSP Initiative (2014-2025).

Legend: A – Allowable; C – Conditional; X – Prohibited. See Codes for superscript numbers. General and Area-based Management Considerations apply to all activities. See Master List of Definitions for marine activities.

Sectors	Marine Activity *(Definition in Master List)*	Zone 2
Fisheries	*Aquaculture Operational*	C [1,3,4,5,9,15]
	Aquaculture Restorative	C [1,3,4,5,9,15]
	Artisanal Fishing (Small-scale Fisheries)	C [1,3,4,6,12]
	Fly Fishing, blue water	C [1,3,4,6,9]
	Fly Fishing, lagoon	C [1,3,4,6,9]
	Industrial Pelagic Longline	C [1,4,6,12]
	Industrial Purse Seine, free schools	C [1,4,6,12,14]
	Industrial Purse Seine, associated schools	C [1,4,6,12,14]
	Industrial Purse Seine, supply vessels	C [1,4,6,12,14]
	Recreational Fishing	C [1,3,4,6,9]
	Semi-industrial, hand gathering (Small-scale Fisheries)	C [1,3,4,6,12]
	Semi-industrial, hook & line (Small-scale Fisheries)	C [1,3,4,6,12]
	Semi-industrial, longline (Small-scale Fisheries)	C [1,3,4,6,12]
	Sport Fishing (multiple activities)	C [1,3,4,6,9,11]
	Subsistence Fishing	C [1,2,4,6,9]
Maritime Infrastructure	*Ballast Water and Bilge Dumping*	C [1,4]
	Beach Replenishment	C [1,4]
	Bunkering at Sea	C [1,4]
	Bunkering at Sea, fishing vessels	C [1,4]
	Coastal Dredging and Dredge Spoils	C [1,4,13]
	Commercial Shipping	C [1,4]
	Desalination, boat-based	C [1,4]
	Desalination, land-based	C [1,4]
	Disposal, Dumping	X
	Ferries and Transportation	C [1,4,13]
	Ports, Marinas, Wharves, Jetties	C [1,4,13]
	Reclamation	X
	Renewable Energy, deep water thermal	C [1,4,13]
	Renewable Energy, solar marine	C [1,4,13]
	Renewable Energy, tidal	C [1,4,13]
	Renewable Energy, wave	C [1,4,13]
	Renewable Energy, wind offshore	C [1,4,13]
	Structures, marine other	C [1,3,4,13]
	Underwater Cables	C [1,4,13]
Non-Renewable & Prospecting	*Bioprospecting Development*	C [1,4,5,8]
	Mining, deep-sea	X
	Mining, sand	X
	Mining, shallow	X
	Petroleum Exploration, Drilling	C [1,4,5,8]
	Petroleum Development, Production, Extraction	C [1,4,5,8]
Tourism & Recreation	*Anchorages and Mooring Buoys*	C [1,3,4]
	Cruise ships	C [1,3,4,9]
	Motorised Activities, commercial	C [1,3,4,9,11]
	Motorised Activities, non-commercial	C [1,3,4,9]
	Non-Motorised Activities, commercial	C [1,3,4,11]
	Non-Motorised Activities, non-commercial	C [1,3,4]
	Tourism Accommodation, terrestrial	C [1,4]
Research & Monitoring	*Aquaculture Research*	C [1,3,4,5,9,15]
	Bioprospecting Research	C [1,4,5,9]
	Hydrographic Surveys	C [1,4,5,9]
	Scientific Geophysical Surveys and Research	C [1,4,5,7,9]
	Scientific Research and Monitoring	C [1,4,5,9]

ALLOWABLE ACTIVITIES TABLE – ZONE 3

Allowable Activities Table (AAT) for the Zone 3 areas identified through the SMSP Initiative (2014-2025).

Legend: A – Allowable; C – Conditional; X – Prohibited. See Codes for superscript numbers. General and Area-based Management Considerations apply to all activities. See Master List of Definitions for marine activities.

Sectors	Marine Activity *(Definition in Master List)*	Zone 3
Fisheries	*Aquaculture Operational*	C [1,3,4,5,15]
	Aquaculture Restorative	C [1,3,4,5,15]
	Artisanal Fishing (Small-scale Fisheries)	C [1,3,4,6,12]
	Fly Fishing, blue water	C [1,4,6]
	Fly Fishing, lagoon	C [1,4,6]
	Industrial Pelagic Longline	C [1,4,6,12]
	Industrial Purse Seine, free schools	C [1,4,6,12,14]
	Industrial Purse Seine, associated schools	C [1,4,6,12,14]
	Industrial Purse Seine, supply vessels	C [1,4,6,12,14]
	Recreational Fishing	C [1,3,4,6]
	Semi-industrial, hand gathering (Small-scale Fisheries)	C [1,3,4,6,12]
	Semi-industrial, hook & line (Small-scale Fisheries)	C [1,3,4,6,12]
	Semi-industrial, longline (Small-scale Fisheries)	C [1,3,4,6,12]
	Sport Fishing (multiple activities)	C [1,3,4,6,12]
	Subsistence Fishing	C [1,3,4,6]
Maritime Infrastructure	*Ballast Water and Bilge Dumping*	C [1,4]
	Beach Replenishment	C [1,4]
	Bunkering at Sea	C [1,4]
	Bunkering at Sea, fishing vessels	C [1,4]
	Coastal Dredging and Dredge Spoils	C [1,4]
	Commercial shipping	C [1,4]
	Desalination, boat-based	C [1,4]
	Desalination, land-based	C [1,4]
	Disposal, Dumping	C [1,4]
	Ferries and Transportation	C [1,4]
	Ports, Marinas, Wharves, Jetties	C [1,4]
	Reclamation	C [1,4]
	Renewable Energy, deep water thermal	C [1,4]
	Renewable Energy, solar marine	C [1,4]
	Renewable Energy, tidal	C [1,4]
	Renewable Energy, wave	C [1,4]
	Renewable Energy, wind offshore	C [1,4]
	Structures, marine other	C [1,3,4]
	Underwater Cables	C [1,4]
Non-renewable & Prospecting	*Bioprospecting Development*	C [1,4,5,8]
	Mining, deep-sea	C [1,4,5,8]
	Mining, sand	C [1,4,5,8]
	Mining, shallow	C [1,4,5,8]
	Petroleum Exploration, Drilling	C [1,4,5,8]
	Petroleum Development, Production, Extraction	C [1,4,5,8]
Tourism & Recreation	*Anchorages and Mooring Buoys*	C [1,4]
	Cruise ships	C [1,3,4]
	Motorised Activities, commercial	C [1,3,4,11]
	Motorised Activities, non-commercial	C [1,3,4]
	Non-Motorised Activities, commercial	C [1,3,4,11]
	Non-Motorised Activities, non-commercial	C [1,3,4]
	Tourism Accommodation, terrestrial	C [1,4]
Research & Monitoring	*Aquaculture Research*	C [1,3,4,5,15]
	Bioprospecting Research	C [1,4,5]
	Hydrographic Surveys	C [1,4,5]
	Scientific Geophysical Surveys, Research	C [1,4,5,7]
	Scientific Research and Monitoring	C [1,4,5]

General Management Considerations

The General Management Considerations come from legislation, regulations, scientific studies, government reports, unpublished studies, expert advice, and/or best available information. The considerations began in 2014 with the launch of the SMSP and were updated on an on-going basis as other SMSP outputs were developed and revised. See also the Master List of Definitions, Allowable Activities Tables, and Codes. The General and Area-based Management Considerations were approved by the Executive Committee on 20 May 2024.

References to specific code numbers in General Management Considerations numbers 16 to 36 are there to provide additional information for the AAT Codes Table including background information or context, guidance for implementation, and/or specific instructions for management and implementation.

1. The General Management Considerations apply to all activities and uses within the boundary of the Seychelles Marine Spatial Plan.
2. The SMSP is from the mean high water mark seaward to the boundary of the Exclusive Economic Zone.
3. All activities and uses will be conducted in accordance with applicable national laws, regulations, and policies, as well as applicable international laws, treaties, and agreements. Agreements include the Seychelles Fisheries Partnership Agreements and bilateral agreements. Relevant allowable activities associated with fisheries agreements will come into effect according to dates in those agreements unless otherwise specified by the government for a specific area or zone. Seychelles is a signatory to the United Nations Convention of the Law of the Sea (UNCLOS) including that all vessels have a right of innocent passage through the Exclusive Economic Zone and through the Territorial Sea in accordance with Seychelles legislation and regulations.
4. All terrestrial areas are out of scope for the SMSP. Management considerations or conditions developed for SMSP zones in the Allowable Activities Tables codes may apply when land-based activities will or may impact the marine environment.
5. Terrestrial activities and uses are in scope for the SMSP to the extent that the activity affects, impacts, or influences the maritime zone and marine ecosystem (species, habitats, function). Examples of activities are wastewater discharge, beach dredging or excavation, lighting, and saltwater exchange for on-land fish rearing facilities.
6. Each SMSP zone category has an approved Allowable Activities Table. Recommendations from the SMSP Steering Committee to the SMSP Executive Committee were approved in 2023, with agreement for one table for each zone category. See the Area-based Management Considerations for specific considerations for each of the 13 marine protection areas.
7. The definitions of activities and uses in the Allowable Activities Tables are provided in the SMSP Master List of Definitions.
8. Area-based Management Considerations are unique to each area.
9. For activities or uses that are not identified or listed in the Allowable Activities Tables, contact the relevant authority for direction and SMSP implementation tools and frameworks, including the spatial decision matrix.
10. General and Area-based Management Considerations and Allowable Activities tables were developed using the Guiding Principles of the SMSP and Governance Framework.
11. As per the SMSP process, marine protection zones were designated in accordance with the relevant national acts, legislation, and agreements, and changed upon discussion and review during the SMSP process. The SMSP marine protection areas will be reviewed during implementation and evaluated and/or adapted, as per the implementation review process. The SMSP marine protection zones were approved by the government on 26 March 2020.
12. A phased approach to zoning, designation, and implementation is being used to determine new zones, zone or area management plans, policy, governance arrangements, implementation, and financing for a smooth transition from planning to implementation.
13. The Seychelles Marine Spatial Plan legally came into effect on 31 March 2025 when the SMSP was legally enforceable through a new regulation (S.I. 18 of 2025). The SMSP will be a living document with ongoing monitoring and periodic evaluation and revision. All legal activities within Zones 1 and 2 are allowable until the SMSP regulations are approved and gazetted. Enforcement timelines will be communicated by MACCE and relevant authorities.

14. In consideration that commercial marine charter operators take reservations three to five years in advance, the relevant allowable activities come into effect on a date that will be finalised by the SMSP implementation governance with a phased approach, as was discussed during consultations, unless exceptions have been expressly made for a specific area or zone.
15. In consideration where industrial fisheries have agreements with Seychelles, the allowable activities come into effect on a date that will be finalised by the SMSP implementation governance with a phased approach, as was discussed during consultations unless exceptions have been expressly made for a specific area or zone.
16. Code 1: Commercial tourism activities are working towards increased sustainability and improved management and will demonstrate their long-term commitment to economic and ecological sustainability by a date that will be finalised by the SMSP implementation governance with a phased approach, as was discussed during consultations. Sustainability criteria for tourism must be developed and included in Zone 2 management plans. Draft criteria are included in the Zone 1 and Zone 2 Area-based Management Considerations.
17. Code 1: Recognising that Seychelles has ratified or is a voluntary signatory on international treaties and agreements, activities are also done in accordance with the terms of these agreements including the Convention on International Trade on Endangered Species (CITES), Port State Measures Agreement (PSMA); UN Convention on Biological Diversity (UNCBD), UN Convention for the Law of the Sea (UNCLOS), and UN Sustainable Development Goals (UNSDG).
18. Code 1: Industrial fishing vessels must adhere to Seychelles Fisheries Act, 2014, Part IV Fisheries Management, Reg. 5, First Schedule: *Zones where Fishing by Foreign Vessels is prohibited*. The area of the zone described in this Schedule are shown in red lines on charts ML/ADN/73B deposited in the office of the Director of Surveys. These zones are indicated on the SMSP maps as double blue lines. These areas are generally shallow waters, less than 200 m depth.
19. Code 1: Maritime safety and security are in accordance with the Seychelles Maritime Safety Authority (SMSA), Seychelles Defense Forces, and other relevant delegated authorities.
20. Code 1: Automatic Identification System (AIS) is needed for navigation. Directions from government to use or not use AIS may change in relation to piracy or other national security and safety threats in Seychelles.
21. Code 1: Industrial tuna fishing activities are working towards increased sustainability and improved management and will demonstrate their long-term commitment to economic and ecological sustainability by a date that will be finalised by the SMSP implementation governance with a phased approach, as was discussed during consultations.
22. Code 1: General consideration of activities at dive sites, including that diving will follow protocols in consideration of recognised guidelines for dive safety and marine navigation and safety. Fishing will follow all protocols recognising safety of divers and marine navigation and safety at and surrounding dive sites. A dive site is a location used for SCUBA diving, free diving, other diving, or snorkeling for the purposes of a dive. Acknowledging that some dive sites will be mapped and known publicly, and other dive sites will not be mapped or publicly disclosed. Acknowledging that some fishing locations will be known publicly, and others will not. Management plans need to work with stakeholders to address overlapping uses, spatial conflicts, and different socio-economic values associated with marine habitats and species in and surrounding dive sites.
23. Code 2: Agreement in July 2022 to use the SFA common definition for subsistence fishing. Where there is any commercial activity on an island, subsistence fishing would not be allowable in Zone 1. The SMSP process discussed subsistence fishing in 2023 in relation to Zone 1 and the SMSP EC approved the definition for subsistence fishing from the Fisheries and Aquaculture Bill 2025.
24. Code 2: Definitions of subsistence fishing made during SMSP consultations included that it means a fishing activity other than recreational or sports fishing, conducted exclusively for personal or family consumption, that does not result or intend or appear to result directly or indirectly in the trading or selling of fish or fish products taken during the fishing operations (draft Fisheries and Aquaculture Bill 2025). The previous definition of subsistence means where fish caught are shared and consumed directly by the community, families, and kin of the fishers but which does not result in the trading, offering for sale or selling of fish (SFA common fisheries terms; approved July 2022 by SMSP EC). From

the stakeholder consultation discussions from 2019–2023, subsistence fishing is intended for island residents and non-commercial activities; it is not intended for hotel guests, commercial fishing vessels, and paying guests. Staff associated with essential services or infrastructure including enforcement can engage in subsistence fishing when there are no commercial activities on the island. Subsistence fishing must be included in the management plan, with quotas and reporting to monitor catch. For the avoidance of doubt, in Zone 1, if there is a private residence and/or research in addition to, or as well as, any commercial activities, subsistence fishing is not allowable. In Zone 1, if there are workers and staff associated with the development of a commercial development, subsistence fishing is not allowed. The SMSP Executive Committee decisions in 2023 on subsistence fishing are in the approved Allowable Activities Tables Codes.

25. Code 4: As per the Blue Economy objectives, all fisheries need to be sustainable throughout Seychelles' waters. Fishing activities have the following considerations in addition to laws and regulations: fish spawning aggregation sites are protected (Mahé Plateau Demersal Fishery Co-management Plan) such as for rabbitfish and grouper species; shark nursery areas are avoided by all fisheries including artisanal, sport, recreational, and semi-industrial; follow the guidance provided in: United Nations Food and Agriculture Organisation Code of Conduct for Responsible Fishing, UNFAO Guidelines for Small-scale Fisheries, and UNFAO Code of Conduct National Plan of Action (NPOA).
26. Code 4: Marine species and habitats are governed according to all applicable national and international laws, regulations, policies, treaties, and agreements including considerations that: marine mammals are protected under the Fisheries Act; seabirds, marine turtles, and whale sharks are protected by the Wild Animals and Birds Protection Act, 1961 (WABPA); all Seychelles waters are within the International Convention for the Regulation of Whaling Indian Ocean Whale Sanctuary; and the International Seabed Authority provides direction for deep sea mining in the high seas; there are no international regulations for mining inside the EEZ.
27. Code 4: Restrictions to uses and activities may apply to avoid or minimise disturbance on key species and ecological functions. For example, see the Government of Seychelles National Biodiversity Strategy and Action Plan (NBSAP) 2015–2020.
28. Code 8: Activities associated with geological surveys and prospecting for non-renewable resources are conducted in accordance with international best practices and recommendations from peer-reviewed scientific publications.
29. Code 8: All petroleum exploration licenses are in effect until expiry, with the understanding that active licenses may develop into commercial exploration permits that are valid for 35 years. Before the petroleum development and production phase is approved, a decision-making process must be adopted that is public, transparent, and involves stakeholders. All petroleum exploration must comply with the PetroSeychelles Model Petroleum Agreement (last version 2013).
30. Code 9: To improve on this code in the Allowable Activities Tables related to jet skis, a new code was developed in the 21 July 2022 version to address the complexity of motorised activities that extend beyond jet skis due to the appearance of new motorised devices in marine environment such as underwater scooters and motorised paddleboards. A previous Code 20 read: "Personal and commercial watercraft requires consideration for the compatibility of the use within the marine protection area and may require management plans." Code 20 was edited during stakeholder consultations on 22 November 2022 to read: "Jet skis and other motorised devices such as underwater scooters and motorised paddleboards are prohibited except where authorised for research or essential services." On 22 March 2023, Code 20 was combined with a previous Code 11 (which is now Code 9).
31. Code 9: Authorisation for use of watercraft and motorised devices may also be found in the approved management plans for each area. Where allowable, the use of motorised devices needs to be addressed in the zone management plan(s).
32. Code 10: FAD retrieval and recovery may rely on other capable vessels with experience to retrieve FADs in shallow waters and remove from islands, atolls, and reefs. There are local vessels and companies with the experience and capabilities to retrieve FADs in Outer Islands. Experience is needed to retrieve FADs to avoid or minimise damage to the seabed and terrestrial habitats, and not cause more damage than may have occurred from the beached or stranded FAD.

33. Code 13: Essential access to Zone 1 or Zone 2 relates to services essential for management, enforcement, and monitoring of the marine protection area. Essential access includes to build or maintain such infrastructure and research for the marine protection area, as well as to enforce regulations and policies. Essential access also applies to safety and security such as for emergency response or maritime search and rescue.
34. Code 13: For coastal dredging related to essential access and/or infrastructure in Zone 1 and Zone 2 areas, there is a distinction between local dredging and new development. Local dredging may be needed for essential access to create and/or maintain a navigable channel to the atoll or island or to manage the marine protection area. New development on land for tourism activities is different from essential access for management of marine protection areas.
35. Code 14: A FAD management plan is needed for Fish Aggregating Devices (FAD) for all zone areas. Target species, bycatch, deployment, retrieval, monitoring, tracking, ownership, and ecological impacts to pelagic and coastal ecosystems are among the considerations for a FAD management plan. FAD management currently includes a limit per vessel (as per IOTC recommendations) and a voluntary FAD watch tracking and recovery program for beached FADs on a limited number of Outer Islands with Island Conservation Society Seychelles (ICS). Starting in 2019, purse seine companies are exploring alternative FAD design with biodegradable materials. A FAD management plan (2022) includes impacts and FAD vs. free school sets (Seychelles Fisheries Authority). Vessel owners bear the cost and responsibility for FAD management.
36. Code 15: Aquaculture is comprised of three licenses in Seychelles as of March 2023: Operational, Restorative, and Research. Consult the Seychelles Aquaculture Master Plan and SFA for updates to the laws, regulations, management plans, and policies for the aquaculture sector. Operational Aquaculture, for commercial purposes, is not allowable in Zone 1.

Area Descriptions and Maps

All areas were proposed after extensive consultations with stakeholders, with scientific analyses of best available data, and reaching agreement for support with all marine sectors. The SMSP was an iterative planning process and with the support of the stakeholders, new or expanded areas were proposed to advance the biodiversity protection goal and marine spatial plan for multiple uses. The areas proposed at each milestone involved a revision or change to the protection area boundary, subject to stakeholder agreement and government approval.

The 30% marine protection goal included half in high protection (or fully protected) based on the 2019 IUCN Guidebook. In response to climate change threats (e.g., warmer ocean temperatures, sea level rise) and events (e.g., El Niño, coral bleaching) and uncertainty surrounding the effects that these events would have on the marine ecosystem, the government adopted the precautionary principle and made management decisions that were conservative for the waters surrounding Seychelles. This approach was supported by the scientific community, including recent studies that show the importance of large, effectively managed marine reserves to support climate change resilience of the oceans to increasing threats including ocean acidification, decreased productivity and oxygen availability, and cumulative effects from human activities. The 30% goal was by area and ecological representation for species and habitats; because of the large size of Seychelles' EEZ, the waters were stratified by planning units specific to deep water (> 200 m) and shallow water (≤ 200 m).

The objectives for, and management of, new marine protections in deep water will be different than in shallow waters because of differences in biodiversity, sensitivity to human disturbance, and the status and condition of species and habitats. In shallow waters, for example, protection for coral reefs not only contributes to the long-term health of these ecosystems and supports fishing and tourism activities, but it also supports coastal protection functions important during high winds and tides. Conversely, deep waters have many unique benthic features including seamounts, mountains, guyots, canyons, and plains. Pelagic ecosystems typically function at much larger scales than shallow and nearshore ecosystems and include marine organisms that migrate hundreds or thousands of kilometers to forage and/or breed. The zoning design proposals were developed using all best available data and information from stakeholders, and incorporated information on surface currents, archipelagic ecosystems, species life histories, and gradients of biodiversity. In this way, areas identified as priorities for marine biodiversity conservation avoid overlap with high priority areas for socio-economic activity yet are close enough to source populations that they can be seeded and replenished by currents.

NORTH 0 130 260 Km

FOR DISCUSSION PURPOSES ONLY
Prepared for: Seychelles MSP
Prepared on: 26 February 2024
Prepared by: Spatial Support Systems, LLC
Scale: 1:9,100,000
Map projection: Cylindrical Equal Area
Datum: WGS84
Data Sources: Seychelles MACCE, The Nature Conservancy, GRID Arendal, MarineRegions.org, ESRI

Seychelles' Exclusive Economic Zone
200m Depth Contour
Other Exclusive Economic Zone

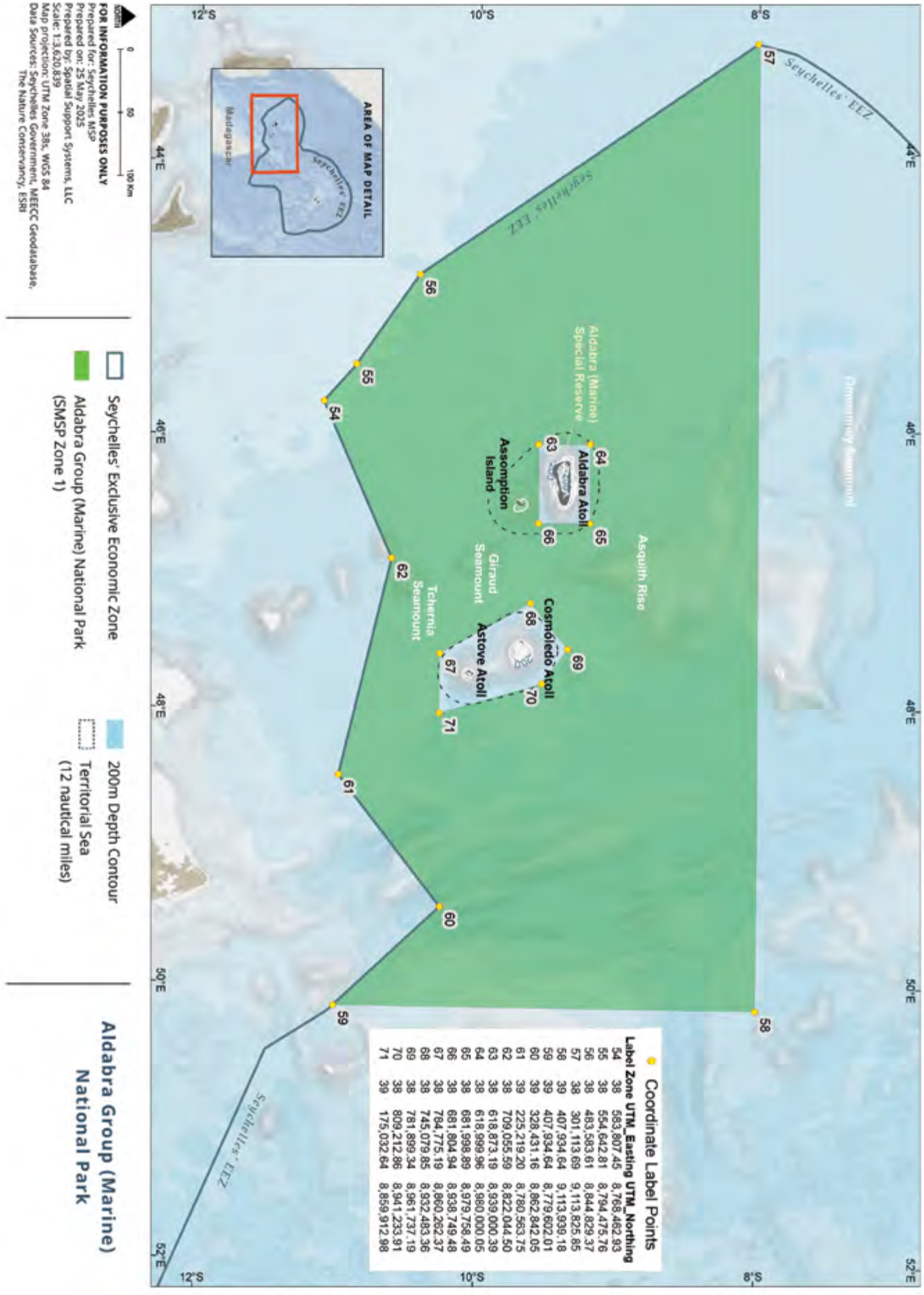
Seafloor Geomorphology
Harris et al., 2014

- Ridge
- Seamount
- Mountains
- Guyot
- Hills
- Plains
- Rise
- Terrace
- Slope
- Canyon
- Trench

Deep Seafloor Geomorphology

ZONE 1 – MARINE NATIONAL PARKS

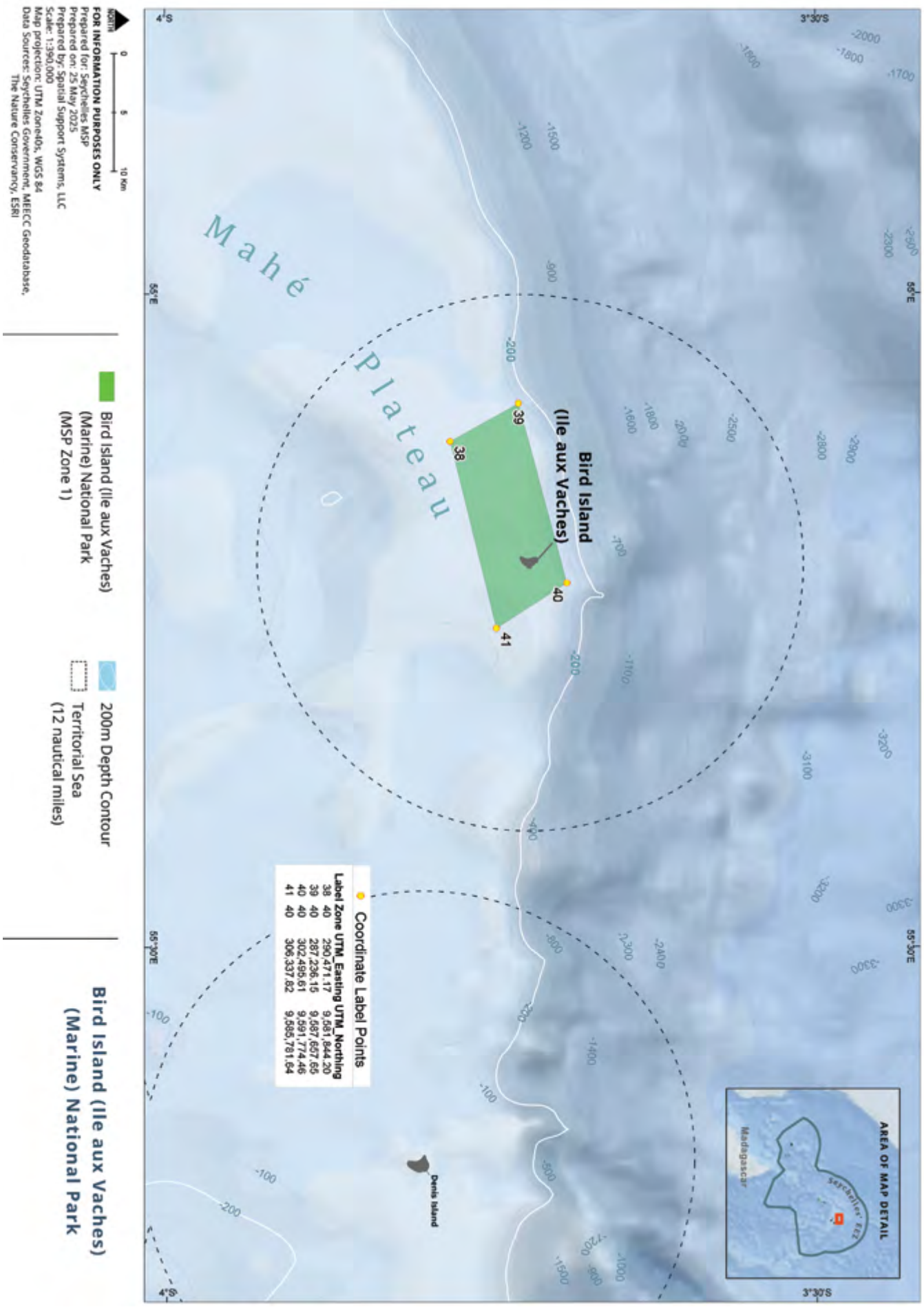
Aldabra Group Marine National Park



Map 7. Aldabra Group Marine National Park, Seychelles.

Gazetted Name: *Aldabra Group (Marine) National Park*		**Size:** 201,235.80 km^2
Milestone: 3	**Zone:** 1	**Percent of EEZ:** 14.89 %
Primary Objective:	To expand high protection status for the waters and seabed surrounding the Aldabra Group and other atolls.	
Geographical Description:	This area is in the southwest of Seychelles' EEZ and extends from north of Aldabra Group west to the boundary with Tanzania and south to the EEZ boundary. The eastern boundary of this area is west of Farquhar Archipelago. Note: the Seychelles EEZ boundary is not finalised in all areas. Coordinates for the EEZ are accurate as of March 2025. The coordinates of this area will always align with the existing EEZ boundary, which may change on review and revision by Government of Seychelles.	
Existing Marine Designations:	Aldabra (Marine) Special Reserve (2018) Foreign Fishing Prohibited Area #9 (Aldabra and Assomption): 6,971 km^2 Area To Be Avoided (Aldabra Group), International Maritime Organisation (IMO)	
Ecological Description:	This area contains shallow, pelagic, and deep-sea habitats surrounding Aldabra Group including "Giraud" and "Tchernia" seamounts, canyons, slopes, hills, mountains, and plains. Species associated with the area include demersal and pelagic fish, turtles, sharks, rays, cetaceans, and seabirds. Unique shallow water habitat features are found only in this part of the EEZ because of the distinct geological features inside the Aldabra (Marine) Special Reserve – the second largest raised atoll in the world. It contains foraging habitat for frigatebirds as well as humpback whale breeding habitat. The area includes a portion of the WIOMER expert polygon for upwelling (#47). Scientific research in Aldabra Group shows high fish biomass in waters surrounding the atolls and islands, the highest in the EEZ. The waters contain important populations of sharks and there is concern about decline of top trophic predators in key habitats. Lagoons are shark and fish nurseries.	
Summary of Biodiversity Representation:	This area contains 41 biodiversity features. There 16 of 44 habitat conservation features, 25 of 38 species conservation features, including: 6 seabirds, 14 cetaceans, 11 deep water and 5 shallow water habitats, 1 BirdLife International Important Bird and Biodiversity Area (IBA), turtle foraging and nesting habitats, and 1 WIOMER site. Cetacean distributions overlap 98% of the area and WIOMER regional priority site covers 65%. Frigatebird foraging covers 48%, deep water features such as abyssal plains, hills, and deep-sea mountains cover 33%, 22%, and 11%, respectively. It contains the only remaining location with *Dugong dugong* in Seychelles. It also includes a migration route for calving Southern Ocean humpback whales *Megaptera novaeangliae*.	
Economic Description:	Marine charters for sport and big game fishing surrounding the atolls with live-aboard charters. The atolls are important as "safe havens" in bad weather. Subsistence fishing occurs for staff and volunteers on the islands. Cruise ships visit Aldabra and guests transit to the atoll via Assomption Island, where there is an airstrip. Since the 1970s, the waters surrounding the Aldabra Group have been used for tuna fishing (Seychelles-flagged and foreign-flagged) with purse seine and longline gear. International shipping passes to the west of Aldabra, coming within 12 nautical miles of the atoll. Marine research and monitoring are conducted by the Seychelles Island Foundation. Radar stations to monitor vessel traffic are located on Assomption and Astove.	
Possible New Future Uses:	In 2017, the SMSA was developing a proposal for a "Particularly Sensitive Sea Area" (PSSA) for the waters surrounding Aldabra Atoll, a designation with the IMO. This proposal is on hold until new capacity is identified to lead the file. The Island Development Corporation (IDC) development plan (2018–2023) included potential future tourism on Assomption and the tourism development is included in the new IDC plan (2024–2029).	
Comments:	Aldabra Group (Marine) National Park was designated in Milestone 1. The area was expanded and re-designated in Milestone 2 and again in Milestone 3.	

Bird Island Marine National Park



Map 8. Bird Island (Ile aux Vaches) Marine National Park, Seychelles.

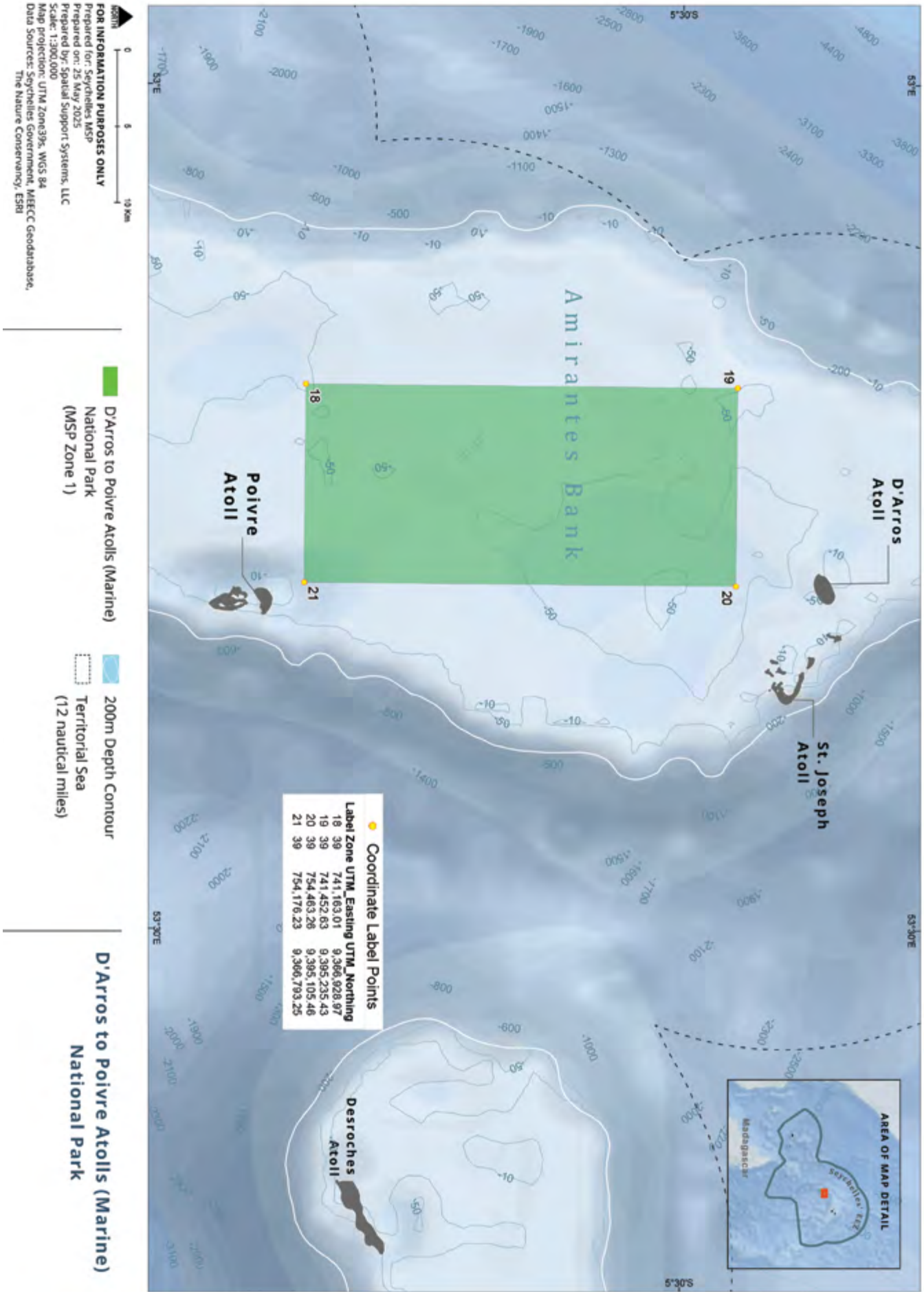
Gazetted Name: *Bird Island (Ile aux Vaches) (Marine) National Park*		**Size:** 106 km^2
Milestone: 3	**Zone:** 1	**Percent of EEZ:** 0.008 %
Primary Objective:	To expand high protection status for marine biodiversity in the waters surrounding Bird Island, one of the two coralline cays that exist on the Mahé Plateau.	
Geographical Description:	Bird Island lies approximately 100 km north of Mahé. This boundary includes Bird Island and the shallow waters to the west and south. It does not include Silhouette Bank.	
Existing Marine Designations:	Foreign Fishing Prohibited Area #1 (Mahé Island and Seychelles Bank): 63,891 km^2 International shipping: Area To Be Avoided (Mahé Plateau), International Maritime Organisation; British Admiralty Charts	
Ecological Description:	This is one of only two coralline cays on the Mahé Plateau. There is high species diversity due to proximity to the edge of the shallow water shelf of the northern Mahé Plateau. It has proximity to deep water canyons, high depth gradients, and upwelling. Bird Island is a significant seabird colony in Seychelles with large colonies of Sooty Terns, Brown Noddies, and frigatebirds. Breeding birds forage in waters beyond the drop-off and tagging studies from scientists in Seychelles have obtained evidence of breeders and young-of-the year birds traveling north to Coco de Mer seamount ridge and beyond the Seychelles EEZ. Bird Island has nesting sea turtles as well as ray species. There is high biodiversity relative to the size of the marine area. Bird Island is recognized internationally as a key foraging and nesting area used by nine seabird species. Coral bleaching is a concern for the reefs contained in this zone and extensive coral bleaching did occur during the warming events of the 1997–1998 El Niño and 2016–2017.	
Summary of Biodiversity Representation:	This area contains 34 biodiversity features. It contains 9 of 44 habitat conservation features and 25 of 38 species conservation features: 9 seabirds, 9 cetaceans, 1 deep water, 4 shallow water, 1 BirdLife International IBA, seagrasses, turtle nesting and foraging habitats, and 1 WIOMER site. The WIOMER site covers 100% and seagrasses cover 26% of the area. Frigatebird foraging covers 100% of the area. This area is 99% shallow water continental shelf habitat.	
Economic Description:	Bird Island has been privately owned since 1967 and is managed for eco-tourism, nature tourism, and conservation, including scientific research. There is an airstrip on Bird Island as well as shelter for anchoring. Charter operators for tourism, sport-fishing and recreational fishing, including tournaments, and subsistence fishing for staff use the drop-off waters and to the south and west of Bird Island. Silhouette Bank is used by artisanal fishing, beyond the Zone 1 area boundary. Petroleum exploration and development voluntarily exclude waters within 5 km of the island. Active and expired licensed blocks are in proximity to Bird Island to the east. Shipping and transportation are directed to the passage between the IMO Areas To Be Avoided on the Mahé Plateau. In bad weather, Bird Island provides safe haven for vessels. Artisanal, semi-industrial, and sport fishing use the banks near Bird Island and the drop-off.	
Possible New Future Uses:	None identified 2014–2019.	
Comments:	The proposal has also been specifically discussed with owners and managers of Bird Island for implementation and management. There is interest to manage the waters for high protection status. This island is in the Seychelles gazette as Ile aux Vaches. It also sometimes is named in other documents as Ile aux Vaches Marine.	

D'Arros Atoll Marine National Park

Map 9. D'Arros Atoll Marine National Park, Seychelles.

Gazetted Name: *D'Arros Atoll (Marine) National Park*		**Size:** 25 km^2
Milestone: 3	**Zone:** 1	**Percent of EEZ:** 0.002%
Primary Objective:	To expand high marine protection for representative habitats and species found around D'Arros Island.	
Geographical Description:	This area surrounds D'Arros Island on the Amirantes Bank, west of Desroches and St Joseph. The area is approximately 35 km south of Rémire. The boundary avoids a deep water area north of D'Arros and does not include St Joseph Atoll.	
Existing Marine Designations:	Foreign Fishing Prohibited Area #5 (Amirantes): 17,285 km^2	
Ecological Description:	Shallow marine habitats include seagrasses, coral reef structures, platform reef, atoll-like rim, platform reef lagoon, and submerged reef flats. Species associations with marine habitats include demersal fish, invertebrates, cetaceans, turtles, sharks, rays, and seabirds. The adjacent upwelling areas are used by pelagic marine life (e.g., whales, sharks, seabirds, pelagic fishes). Scientific studies at D'Arros have found ray aggregations with high degree of regularity. Comprehensive descriptions of the ecology and biodiversity of D'Arros and surrounding waters can be found in numerous publications including those from the D'Arros Research Centre, which can be accessed via the Save Our Seas Foundation website. A new species of fish was found at D'Arros in May 2019: the Daly's dwarf goby *Eviota dalyi*.	
Summary of Biodiversity Representation:	There are 36 biodiversity features. The area contains 9 of 44 habitat conservation features and 27 of 38 species conservation features: 9 seabirds, 11 cetaceans, 7 shallow water, 1 BirdLife International IBA, seagrasses, turtle nesting and foraging habitats, and 1 WIOMER site. Cetacean distributions overlap 78% of the area, WIOMER covers 100%, and frigatebird foraging covers 99%. There is high representation of platform reef infilled rim—one-third of the 30% conservation goal is found here. There is a small amount of a geologic feature called sand cay with phosphatic sandstone.	
Economic Description:	D'Arros has been a private island since 1975. This area is of low importance for artisanal fisheries in the Amirantes Group; there is 16% overlap with the top 50% of artisanal locations. Tourism, sport fishing, and live-aboard yacht charters occur in waters surrounding St Joseph and D'Arros. St Joseph, east of D'Arros, is very important for fly fishing and is noted as one of the best locations in Seychelles. Historic sea cucumber fishing locations around D'Arros averaged 167 caught per year (2003–2012).	
Possible New Future Uses:	None identified 2014–2019.	
Comments:	During stakeholder consultations and meetings, the original proposed boundary included St Joseph and D'Arros atolls. The boundary for Zone 1 and high protection was revised in Milestone 3 discussions to include just the D'Arros Atoll because of the importance of St Joseph for sport and fly fishing. Discussions are ongoing with managers of the atoll for input on the proposal. The Save Our Seas Foundation D'Arros Research Centre has indicated they are supportive for increased protection for waters surrounding D'Arros and St Joseph Atolls. In Milestone 3, waters surrounding St Joseph were proposed as Zone 2 in the Amirantes to Fortune Bank boundary. Spelling for this atoll sometimes appears as Darros including in MSP Milestone documents. D'Arros is an island.	

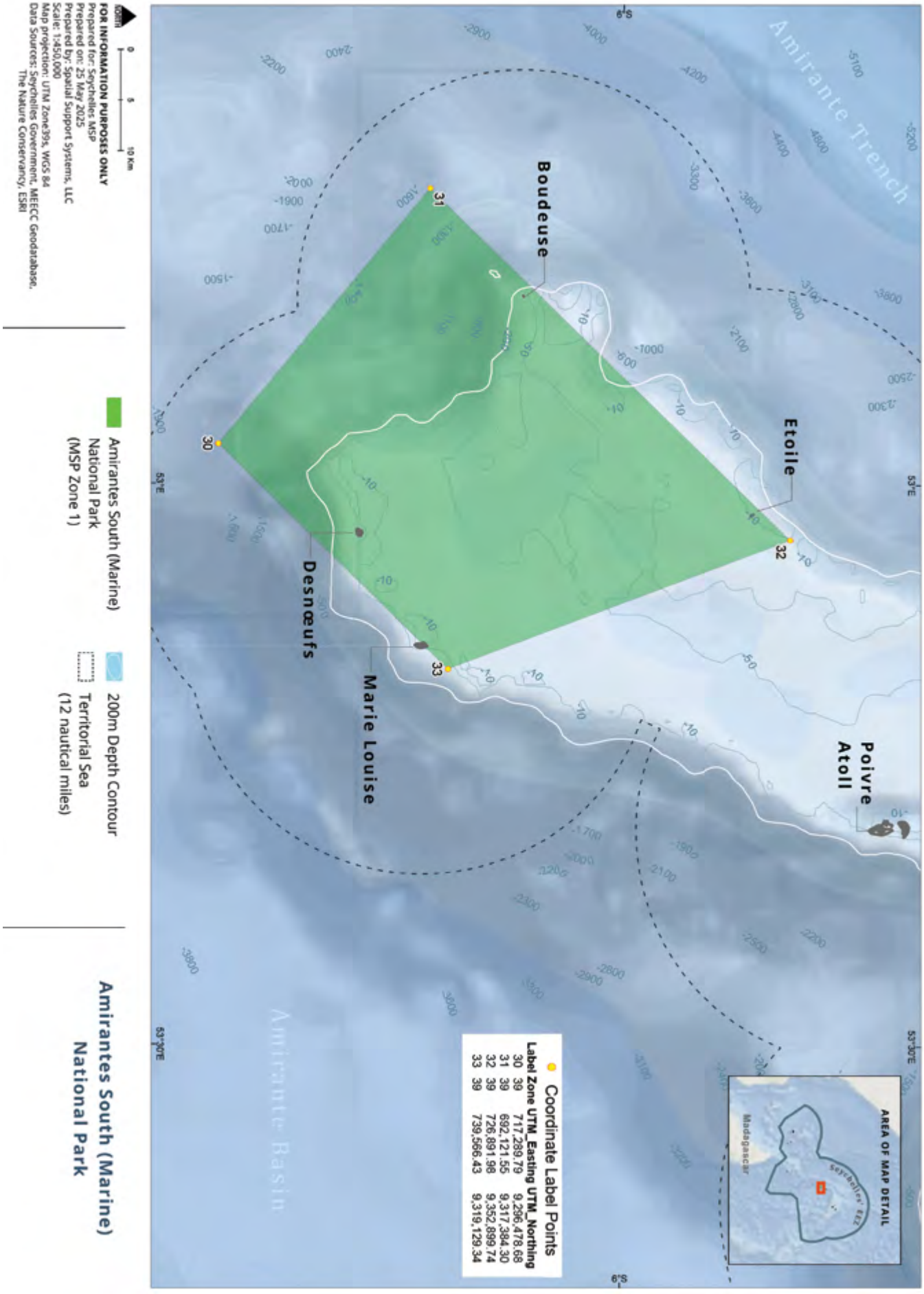
D'Arros to Poivre Marine National Park



Map 10. D'Arros to Poivre Marine National Park, Seychelles.

Gazetted Name: *D'Arros to Poivre Atolls (Marine) National Park*		**Size:** 370 km^2
Milestone: 3	**Zone:** 1	**Percent of EEZ:** 0.03%
Primary Objective:	To expand marine protection and create ecosystem connectivity within Amirantes for representative habitats and species found on the Amirantes Bank between D'Arros and Poivre Atolls.	
Geographical Description:	The area includes bank habitats south of D'Arros and north of Poivre Atolls. The area is approximately 28 km north to south, and 12 km east to west.	
Existing Marine Designations:	Foreign Fishing Prohibited Areas #5 (Amirantes): 17,285 km^2	
Ecological Description:	Situated entirely on the shallow water shelf (<200m), marine habitats include seagrasses, and high-relief bank reef infilled rim. Species associations with marine habitats include demersal fish, invertebrates, cetaceans, turtles, sharks, rays, and seabirds.	
Summary of Biodiversity Representation:	This area contains 35 biodiversity features. There are 11 of 44 habitat conservation features and 24 of 38 species conservation features: 9 seabirds, 11 cetaceans, 7 shallow water, 1 BirdLife International IBA, seagrasses, turtle foraging habitats, and 1 WIOMER site. There is 100% overlap with all cetaceans except orcas (54%). WIOMER covers 100%, seagrasses cover 46%, and frigatebird foraging covers 99% of the area. Medium-relief, shelf-bank lagoon covers 65%. This area facilitates habitat connectivity along the shallow water shelf (≤ 200 m) of the Amirantes Bank. The area represents 50% of all high-relief platform reef atoll-like rim and high-relief bank platform reef sand cay rim.	
Economic Description:	Artisanal fishing, sport fishing, and tourism (yacht charters, diving) use this area. There is low relative value of this area for domestic fishing, with 8% of the area overlapping with the top 50% artisanal fishing locations. Historic sea cucumber fishing locations (2003–2012) indicate approx. 200 vessel locations per year, third behind Amirantes South and Poivre. The indication from stakeholders is that sea cucumber in this area is overfished. The drop-off areas are not in this zone because of the importance for local marine charters, sport fishing, artisanal, and semi-industrial fisheries.	
Possible New Future Uses:	None identified 2014–2019.	
Comments:	This area was proposed in discussions with fisheries association representatives on Mahé for suggestion of areas in shallow waters of Amirantes for high protection status.	

Amirantes South Marine National Park

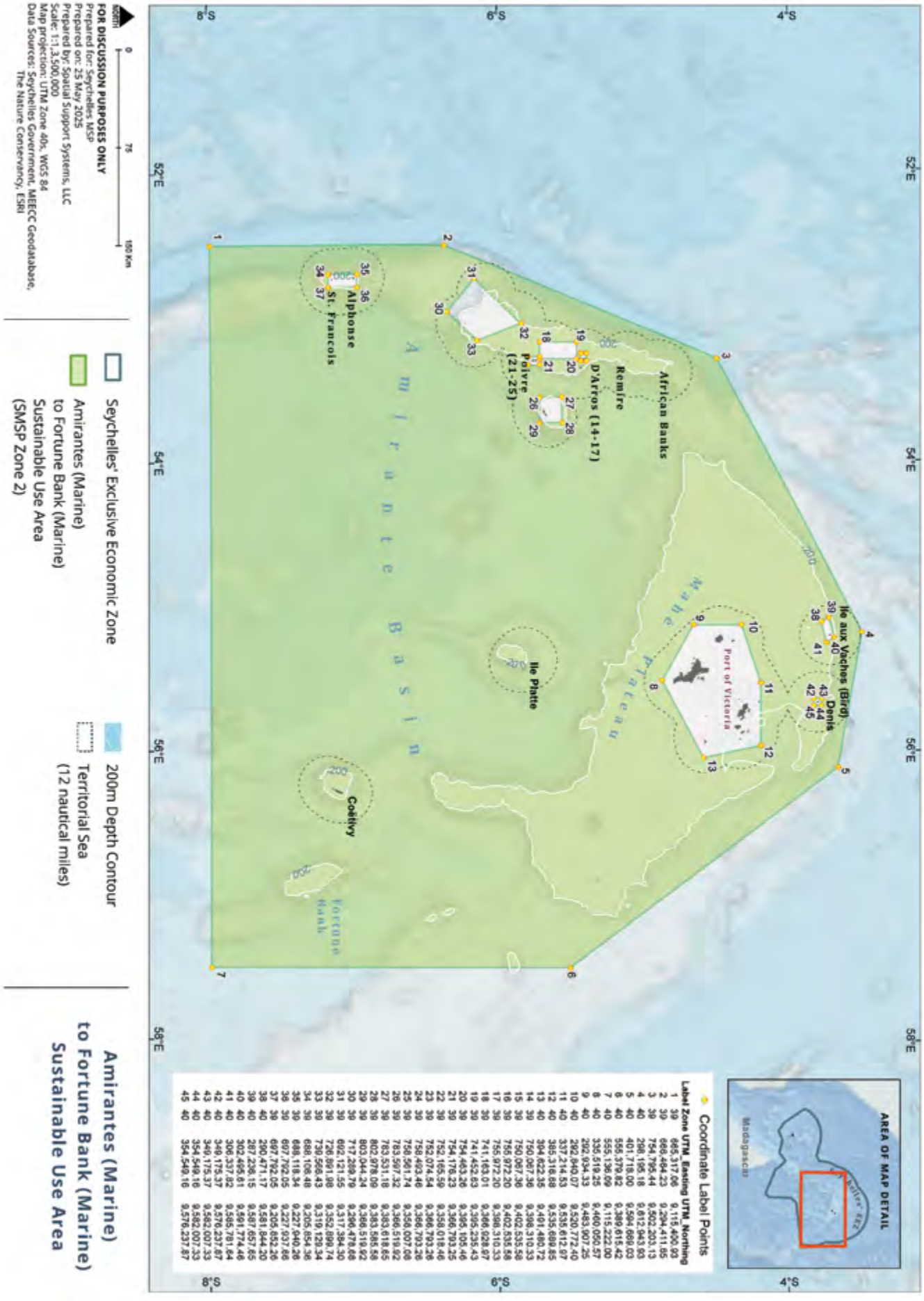


Map 11. Amirantes South Marine National Park, Seychelles.

Gazetted Name: *Amirantes South (Marine) National Park*		**Size:** 1,335 km^2
Milestone: 3	**Zone:** 1	**Percent of EEZ:** 0.1%
Primary Objective:	To expand marine protection for representative habitats and species surrounding Marie-Louise, Boudeuse, Etoile and Desnouefs Atolls, and the shallow bank habitats in the southern Amirantes.	
Geographical Description:	This area is located on the southern end of the Amirantes Bank and includes waters surrounding the islands of Etoile, Boudeuse, Desnouefs, and Marie-Louise.	
Existing Marine Designations:	Etoile Nature Reserve Boudeuse Island Nature Reserve Foreign Fishing Prohibited Area #5 (Amirantes): 17,285 km^2	
Ecological Description:	Shallow waters include seagrasses, submerged reef flats, platform reef with rocky rim, and ridge features. Species associations with marine habitats include demersal fish, invertebrates, cetaceans, turtles, sharks, rays, and seabirds. The 200-m drop-off and upwelling areas are used by pelagic marine life (e.g., whales, sharks, seabirds, pelagic fishes). All islands within this zone have large bird populations. Marie-Louise has the only colony of Red-footed Boobies in the Amirantes. This area facilitates habitat connectivity along the shallow water shelf (≤ 200 m) of the Amirantes Bank, and between the shallow water shelf and adjacent high gradient continental slope. Situated at the southwest margin of the Amirantes Bank, the area experiences significant north to south ocean currents during the southeast monsoon. Etoile and Boudeuse are adjacent to upwelling areas that may serve as thermal refugia during ocean warming events.	
Summary of Biodiversity Representation:	This area contains 40 biodiversity features. There are 15 of 43 habitat conservation features and 25 of 38 species conservation features: 7 seabirds, 11 cetaceans, 3 deep water, 8 shallow water, 1 BirdLife International IBA, seagrasses, turtle nesting and foraging habitats, and 1 WIOMER site. There is 88% overlap with all cetaceans. WIOMER covers 100%, seagrasses cover 76%, and canyons cover 9%. There are multiple shallow habitat features including platform reefs and submerged reef flats.	
Economic Description:	Marine charters and big game/sports fishing use this area. Historic sea cucumber fishing locations (2003–2012) show variable and high use and average 557 mean fishing locations per year. Waters surrounding Desnoeufs are relatively important within the Amirantes for artisanal fishing; there is 73% overlap with the top 50% of artisanal locations. There is an airstrip on Marie-Louise, operated and maintained by IDC. Sea access to this island is very dangerous. There is a desalination plant on Marie-Louise.	
Possible New Future Uses:	Studies are underway on Marie-Louise to examine ecosystem conservation, restoration, and enhancement. Development plans may include a small IDC eco-tourism project on Marie-Louise.	
Comments:	Revisions to the design in this area reduced the overlap with sea cucumber fishing locations by 19%. The conversations with stakeholders (biodiversity, fisheries, marine charters) reached a compromise for biodiversity and marine uses. Proposals for high biodiversity areas near African Banks were exchanged for the water surrounding these islands, with avoidance of key drop-off locations for sport fishing, charters, and artisanal or semi-industrial fishing.	

ZONE 2 – MARINE SUSTAINABLE USE AREAS

Amirantes to Fortune Bank Marine Sustainable Use Area



Map 12. Amirantes to Fortune Bank Marine Sustainable Use Area, Seychelles.

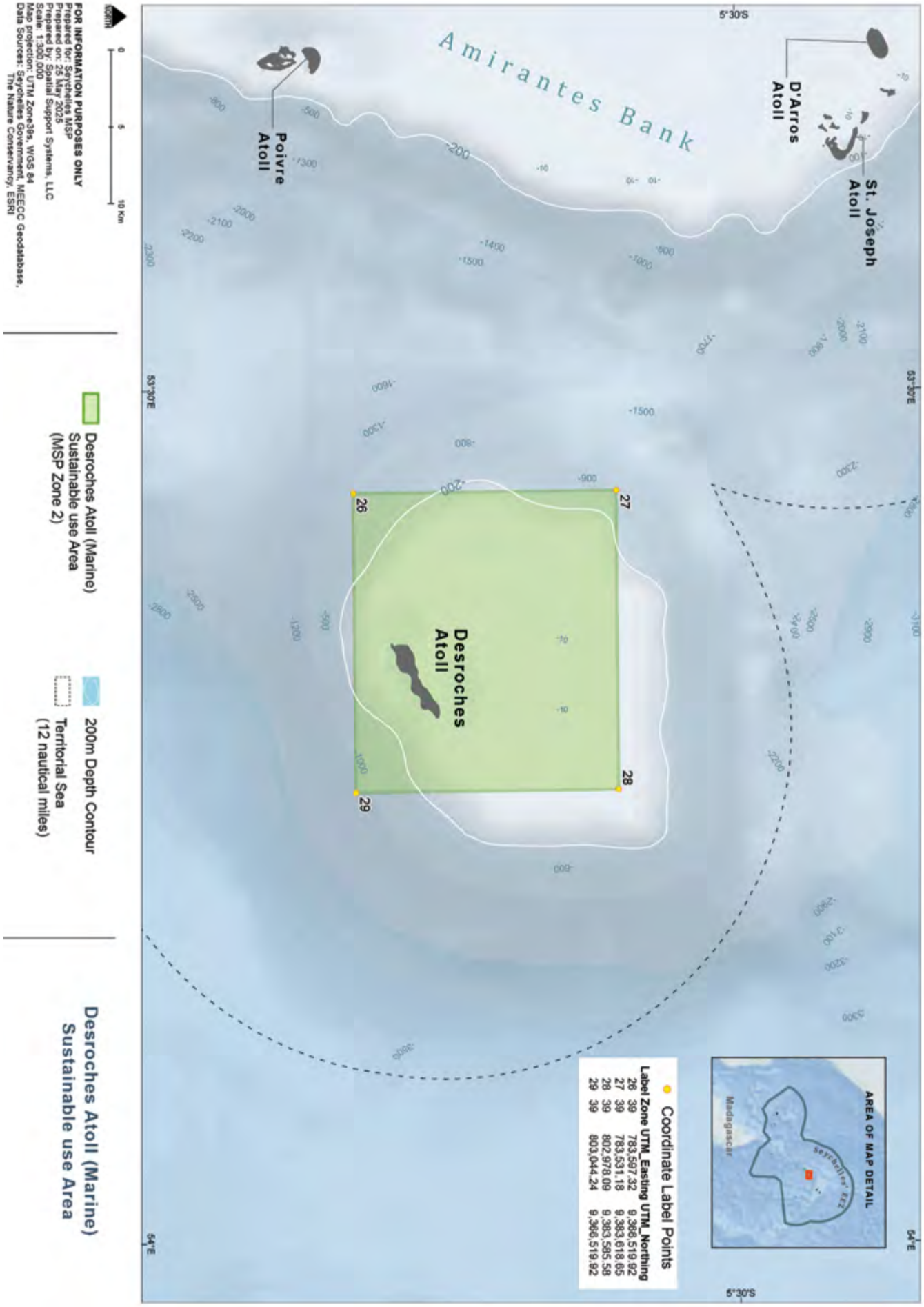
Gazetted Name: *Amirantes (Marine) to Fortune Bank (Marine) Sustainable Use Area*		**Size:** 217,589 km^2
Milestone: 3	**Zone:** 2	**Percent of EEZ:** 16.1%
Primary Objective:	To expand for protection and sustainable uses. Medium biodiversity protection status for high diversity of habitats and species in deep and shelf waters from the Amirantes to Fortune Bank and provide important economic opportunities for sustainable uses that support Seychelles' Blue Economy and climate change objectives.	
Geographical Description:	The area is an expansion of the Amirantes (Marine) to Fortune Bank (Marine) Area of Outstanding Natural Beauty gazetted in Milestone 2. This area will be re-designated to include waters from the Amirantes Group east to Fortune Bank.	
Existing Marine Designations:	African Banks Protected Area Boudeuse Island Nature Reserve Etoile Nature Reserve Areas To Be Avoided, Mahé Plateau International Maritime Organisation Foreign Fishing Prohibited Area #1 (Mahé Island and Seychelles Bank): 63,891 km^2 Foreign Fishing Prohibited Area #2 (Platte Island): 2,377 km^2 Foreign Fishing Prohibited Area #3 (Coëtivy Island): 2,950 km^2 Foreign Fishing Prohibited Area #4 (Fortune Bank): 2,406 km^2 Foreign Fishing Prohibited Area #5 (Amirantes Islands): 17,285 km^2	
Ecological Description:	Deep water marine habitat covers 80% of this area and includes canyons, guyots, seamounts, plateau, slopes, and plains. This area includes the "Fred" seamount and ocean currents develop clockwise (SE) and counterclockwise (NW) currents during monsoon seasons. The 200-m drop-off and upwelling areas are used by pelagic marine life (e.g., whales, sharks, seabirds, pelagic fishes). Species associations with marine habitats include demersal fish, invertebrates, cetaceans, turtles, sharks, rays, and seabirds. Shallow habitats include seagrasses, submerged reef flats, and bank lagoons.	
Summary of Biodiversity Representation:	This area contains 67 biodiversity features. There are 38 of 44 habitat conservation features and 29 of 38 species conservation features: 9 seabirds, 12 cetaceans, 15 deep water, 18 shallow water, 1 BirdLife International IBA, seagrasses, turtle nesting and foraging habitats, and 1 WIOMER site. Cetacean distribution (11 species) overlaps 100% of area, while WIOMER covers 46%, and seagrasses cover 7%. It is a high species and habitat biodiversity area with high overlap of pelagic birds and mammals.	
Economic Description:	Artisanal, semi-industrial longline, industrial purse seine, and longline fisheries occur in this area. There is high value for industrial purse seine and semi-industrial fishing. Marine charters, sport fishing, and other marine recreation and tourism including deep sea fishing and dive tours occur both in shallow waters and at drop-off locations within 20 km of the 200-m depth contour. Commercial shipping traffic passes between the Mahé Plateau and African Bank. PetroSeychelles has active and expired licensed blocks as well as applications on the Mahé Plateau.	
Possible New Future Uses:	Land-based aquaculture has been proposed in some areas of the Amirantes (SFA).	
Comments:	This area was gazetted in Milestone 1 then expanded and re-designated first in Milestone 2 and again in Milestone 3.	

Denis Island Marine Sustainable Use Area

Map 13. Denis Island Marine Sustainable Use Area, Seychelles.

Gazetted Name: *Denis Island (Marine) Sustainable Use Area*		**Size:** 31 km^2
Milestone: 3	**Zone:** 2	**Percent of EEZ:** 0.002 %
Primary Objective:	To expand marine protection for biodiversity values and manage for sustainable uses in waters surrounding Denis Island.	
Geographical Description:	Denis Island is approximately 60 km north of Mahé. The boundary of this area is defined by a 2-km buffer zone around Denis Island and adjacent reef structures.	
Existing Marine Designations:	Foreign Fishing Prohibited Area #1 (Mahé Island and Seychelles Bank): 63,891 km^2 International shipping Area To Be Avoided (IMO; British Admiralty Charts)	
Ecological Description:	Denis is adjacent to productive upwelling and marine ecosystems for seabirds, sea turtles, sharks, and cetaceans. The area contains one of two coralline islands on the Mahé Plateau. Upwelling provides nutrients to pelagic and shelf systems. Blue whale breeding habitat and frigatebird foraging habitat have been identified in this area. Seagrass, coral communities, and sandflats occur in shallow habitats. Denis Island is a breeding location for green and hawksbill turtles as well as five seabird species. Species associations with marine habitats include juveniles and adults of pelagic and demersal fish, turtles, sharks, rays, and seabirds. The area is in close proximity to canyons, seamounts, and slope habitats.	
Summary of Biodiversity Representation:	This area contains 29 biodiversity features. There are 7 of 44 habitat conservation features and 22 of 38 species conservation features: 7 seabirds, 8 cetaceans, 3 shallow water, 1 BirdLife International IBA, seagrasses, turtle nesting and foraging habitats, and 1 WIOMER site. WIOMER and frigatebird foraging both cover 100% of the area while seagrasses cover 38%. The area is 95% shelf habitat. There is high importance for representation of continental platform sand reef and turtle nesting areas. There is 100% overlap with a BirdLife International IBA.	
Economic Description	Privately owned, Denis Island has a holiday resort offering luxury accommodations for tourists. Denis Island is also managed for conservation. Sport and artisanal fishing occur in surrounding waters. There is a 79% overlap with the top 50% of locations for artisanal fishing between 2009 and 2013. Limited seismic surveys have been done near Denis and it is in close proximity to active and expired petroleum exploration license blocks held by PetroSeychelles.	
Possible New Future Uses:	None identified in 2019.	
Comments:	Discussion with owners are pending for management or co-management of the zone. Discussions with island managers (Green Island Foundation) were undertaken in 2018–2019 for co-management. High support from stakeholders as Zone 2, including to support sustainable artisanal fisheries. A SeyCCAT-funded project was initiated in 2019 for improving sustainability of artisanal fishing around Denis Island. There is synergy with a GoS-UNDP-GEF PA project that identified the area as a proposed sustainable use area and had a nomination file prepared.	

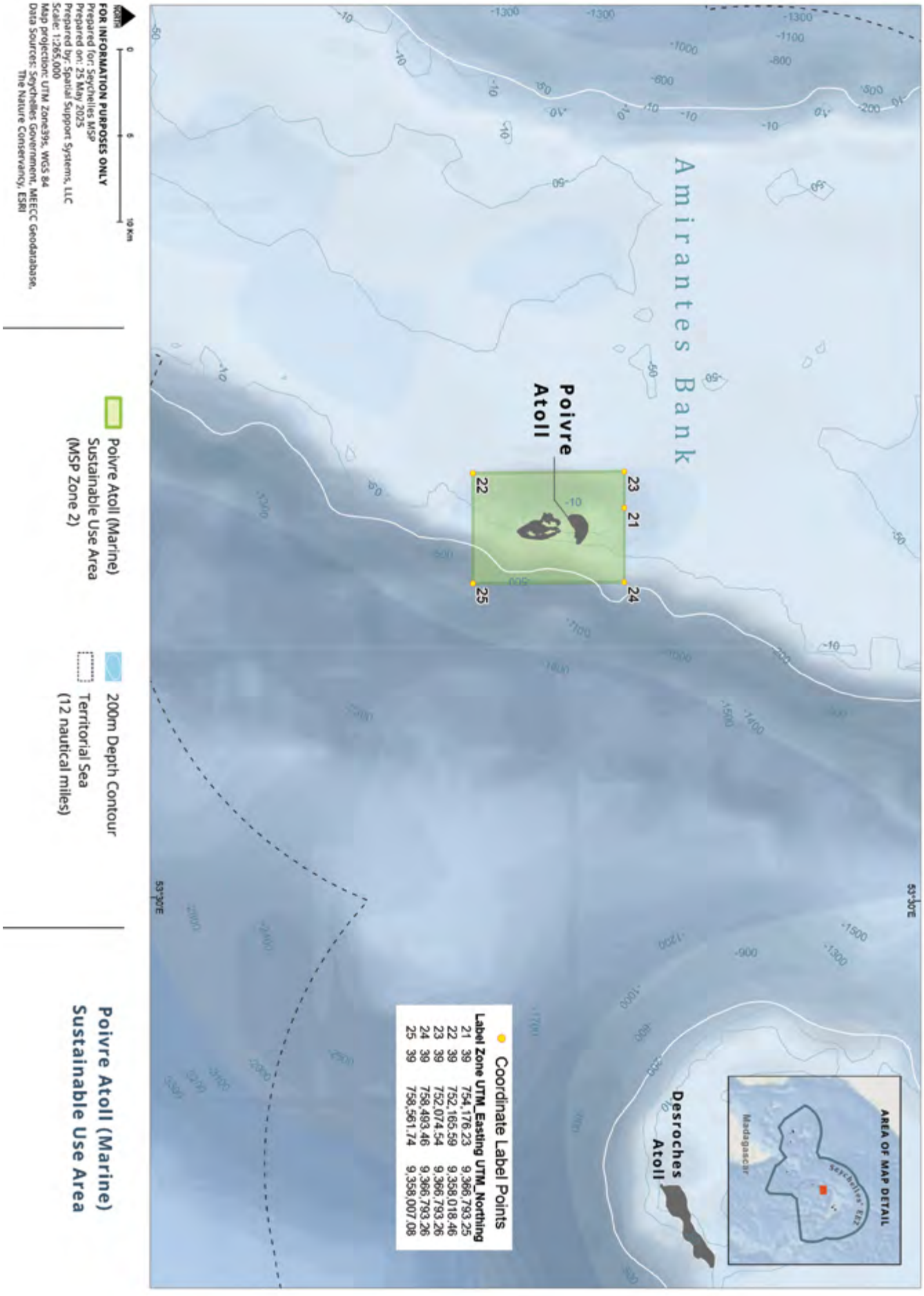
Desroches Atoll Marine Sustainable Use Area



Map 14. Desroches Atoll Marine Sustainable Use Area, Seychelles.

Gazetted Name*: Desroches Atoll (Marine) Sustainable Use Area*		**Size:** 333 km^2
Milestone: 3	**Zone:** 2	**Percent of EEZ:** 0.03%
Primary Objective:	To protect Desroches Atoll's lagoons, reefs, and surrounding waters for the protection and conservation of marine habitats and biodiversity and to provide economic opportunities for their sustainable use.	
Geographical Description:	This area is located off the eastern edge of the Amirantes Banks, approximately 35 km east-northeast of Poivre. The boundary was defined by the GoS-UNDP-GoS Outer Islands Project and is a 14.8 x 17.6-km rectangle encompassing Desroches Atoll, extending not less than 1 km from the outer edge of the reef flat at the closest point and including all areas below MHWM.	
Existing Marine Designations:	Foreign Fishing Prohibited Area #5 (Amirantes): 17,285 km^2	
Ecological Description:	Shallow and deep-water marine habitats include plateaus, continental slope, seagrasses, atoll submerged lagoon, atoll submerged rim, and other coral reef structures. The lagoon and outer reefs support a large diversity of invertebrate life. Coral reef fish families are well represented in the lagoon and on the outer reef slopes; groupers, snappers, and emperors are particularly abundant. Tawny nurse *Nebrius ferrugineus*, grey reef *Carcharhinus amblyrhynchos*, white-tip reef *Triaenodon obesus*, and lemon sharks *Negaprion brevirostris* are common in the lagoon; stingrays and reef manta rays *Mobula alfredi* also occur. Seagrass beds are regionally important foraging grounds for green *Chelonia mydas* and hawksbill *Eretmochelys imbricata* turtles. The seaward wall features a complex of tunnels and overhangs supporting high numbers of lobsters *Panulirus* spp.*,* schools of emperors, snappers, and sweetlips, and is ideal habitat for the now rare giant grouper *Epinephelus lanceolatus*. The outer reef and deeper waters beyond support larger predators such as dogtooth tuna *Gymnosarda unicolor*, giant trevally *Caranx ignobilis*, and cetaceans including bottlenose *Tursiops* sp. and spinner dolphins *Stenella longirostris* and humpback whales *Megaptera novaeangliae*. Great-crested Tern *Thalasseus bergii* numbers exceed the IBA criteria.	
Summary of Biodiversity Representation:	This area contains 35 biodiversity features. There are 11 of 44 habitat conservation features and 24 of 38 species conservation features: 6 seabirds, 11 cetaceans, 2 deep water, 6 shallow water, 1 BirdLife International IBA, seagrasses, turtle nesting and foraging habitats, and 1 WIOMER site. The area has 97% overlap with all cetaceans. WIOMER covers 100% of the area while seagrasses cover 21% and the continental slope covers 12%. Desroches is disjunct from the Amirantes Banks, surrounded by steep gradients in slope and depth. It is the only location in Seychelles where atoll submerged lagoon and atoll submerged rim are found.	
Economic Description:	The waters surrounding Desroches are important for blue-water sport fishing for pelagic species and fly fishing for bonefish *Albula glossodonta* in the lagoon. Diving and snorkelling are popular. Demersal fishing vessels are licensed by the SFA; fishing on the atoll reef and sea cucumber fishing also occur there. Subsistence fishing is undertaken by IDC for island staff consumption. The subsistence catch is monitored and recorded by ICS. Charter vessels and private yachts visit occasionally by arrangement with IDC.	
Possible New Future Uses:	Desroches was surveyed by SFA for mariculture opportunities in 2015. A land-based pearl hatchery at Desroches Island and sea cucumber ranching within the lagoon were considered by SFA to be feasible.	
Comments:	The GoS-UNDP-GEF Outer Islands Project (OIP) held consultations for the OIP areas and received high support for this proposal. The SMSP stakeholders have also recommended high support for this proposal.	

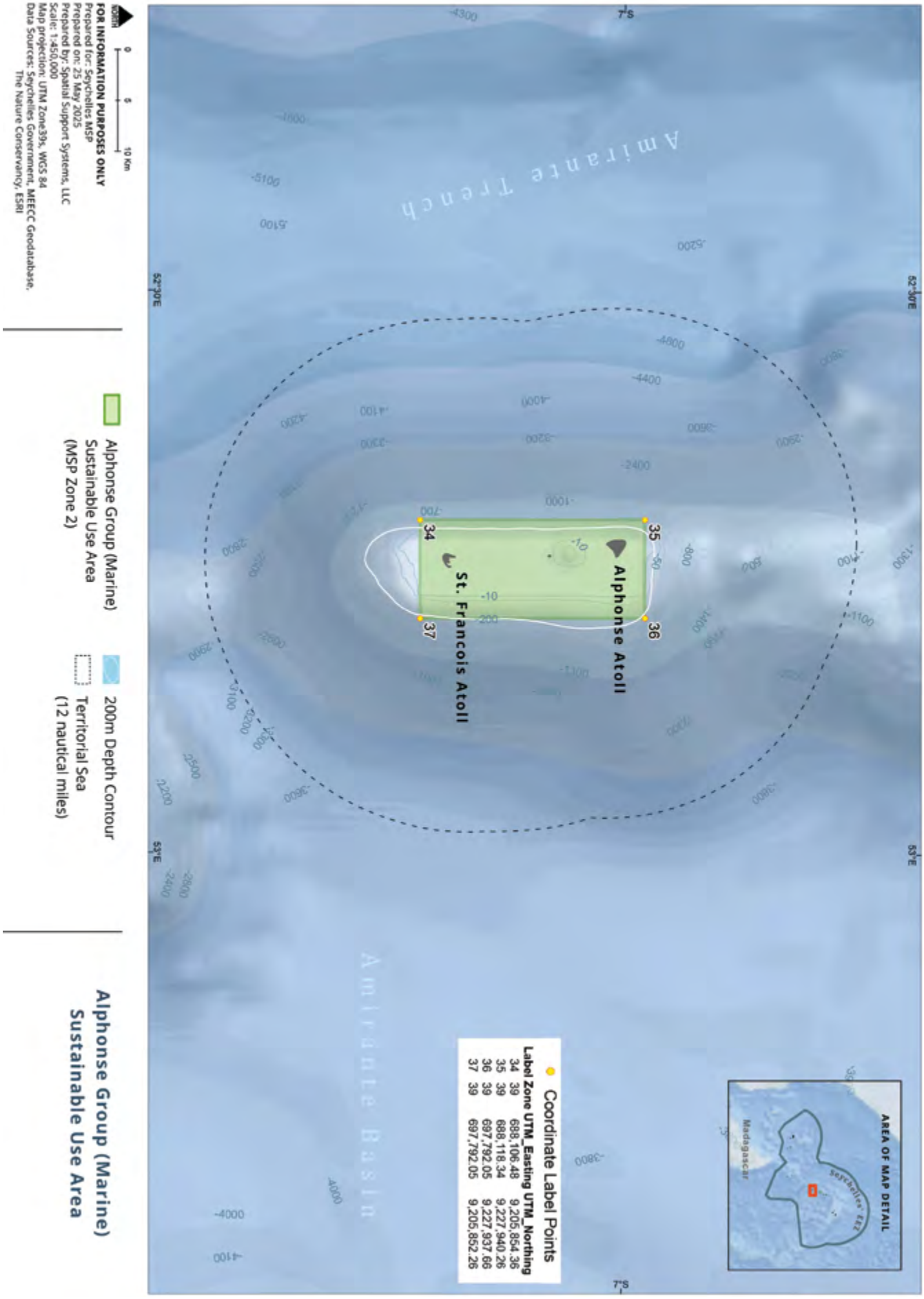
Poivre Atoll Marine Sustainable Use Area



Map 15. Poivre Atoll Marine Sustainable Use Area, Seychelles.

Gazetted Name: *Poivre Atoll (Marine) Sustainable Use Area*		**Size:** 56 km^2
Milestone: 3	**Zone:** 2	**Percent of EEZ:** 0.004%
Primary Objective:	To protect Poivre Atoll's lagoon, reef, and surrounding waters for the protection and conservation of marine habitats and biodiversity and to provide economic opportunities for their sustainable use.	
Geographical Description:	Poivre is located approximately 35 km south of D'Arros and St Joseph atolls, on the Amirantes Bank. The area boundary was developed by the GoS-UNDP-GEF OIP. This area is a 6.5 x 8.8-km rectangle encompassing Poivre Atoll, extending not less than 1 km from the outer edge of the reef flat at the closest point and including all areas below the mean HWM.	
Existing Marine Designations:	Foreign Fishing Prohibited Area #5 (Amirantes): 17,285 km^2	
Ecological Description:	There is no real lagoon at Poivre, but rather a unique and complex plain of drying reef with channels, pools, banks, and flats. Extensive seagrass beds on the reef flats, consisting primarily of *Thalassodendron ciliatum* and *Thalassia hemprichii* with small amounts of *Cymodocea rotundata,* are an important foraging ground for green *Chelonia mydas* and hawksbill *Eretmochelys imbricata* turtles and shallow-water fish species. The reef flats support high densities of molluscs and crustaceans. Mudskippers are numerous around the mangrove margins and blue mangrove crabs *Scylla serrata* are found in the shallow waters of the Ile du Sud inlets. The richness and diversity of marine life is high, with high densities of shallow-water fish species such as bonefish *Albula vulpes,* trevallies, snappers, emperors, milkfish *Chanos chanos*, mullet, and triggerfish *Balistoides* spp. using the reef flats and larger species populating the outer reef. Sea cucumbers are very numerous in the shallows. Stingrays of several species are exceptionally numerous in the shallows and reef manta rays *Mobula alfredi* occur outside the reef. Risso's dolphins *Grampus griseus* are sighted regularly and other cetaceans such as spinner dolphin *Stenella longirostris* and short-finned pilot whale *Globicephala macrorhynchus* are occasionally seen. Live hard coral cover at Poivre was estimated by ICS at 38% in 2017 (*Porites* sp., *Acropora* sp., and *Pocillopora* sp.).	
Summary of Biodiversity Representation:	This area contains 37 biodiversity features. There are 13 of 44 habitat conservation features and 24 of 38 species conservation features: 6 seabirds, 11 cetaceans, 1 deep water, 7 shallow water, 1 BirdLife International IBA, seagrasses, turtle nesting and foraging habitats, and 1 WIOMER site. There is 80% overlap with all cetaceans. WIOMER covers 100% of the area while seagrasses cover 63%. A small amount of mangrove habitat is also found in this area. There is representation of shallow platform reef, infilled rim feature (21%).	
Economic Description:	Uses of the site include tourism and fisheries. Tourism boat charters and private yachts bring visitors to the waters around Poivre for the high-profile catch and release fly fishery on the Poivre reef flats and to dive, snorkel, and wildlife watch. Commercial demersal fishing vessels, mainly from Mahé and Praslin and licensed by SFA, fish around the atoll. During a 2015 SFA survey of the Outer Islands, the commercially valuable sandfish *Holothuria scabra* was found at Poivre. Subsistence fishing is undertaken by IDC for island staff consumption.	
Possible New Future Uses:	A small ecotourism development is planned for Poivre Island by IDC, which will increase the ecotourism value of the site.	
Comments:	The GoS-UNDP-GEF OIP has held consultations for the OIP areas and received high support for this proposal. The SMSP stakeholders have also recommended high support for this proposal.	

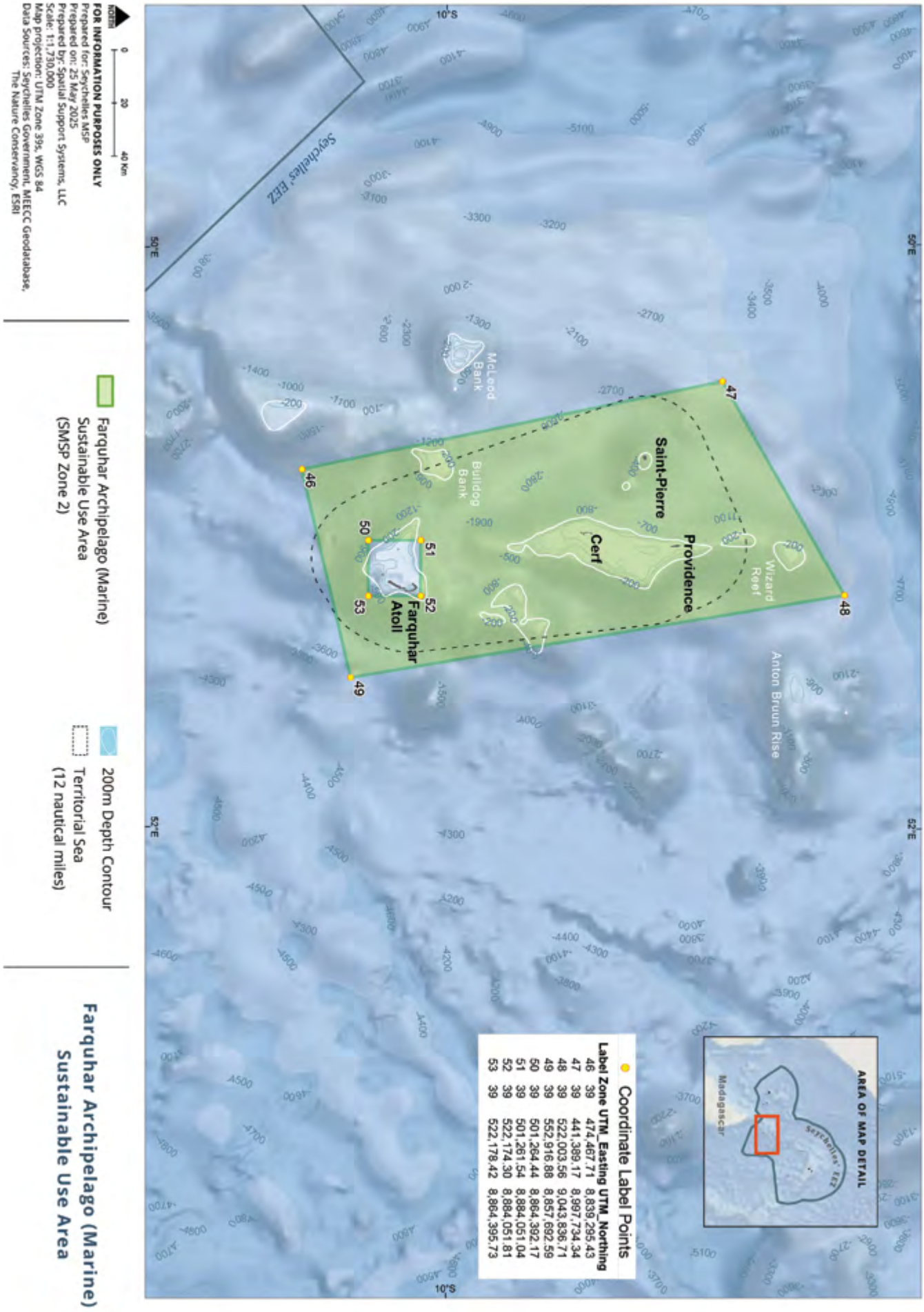
Alphonse Group Marine Sustainable Use Area



Map 16. Alphonse Group Marine Sustainable Use Area, Seychelles.

Gazetted Name: *Alphonse Group (Marine) Sustainable Use Area*		**Size:** 215 km^2
Milestone: 3	**Zone:** 2	**Percent of EEZ:** 0.02 %
Primary Objective:	To protect the Alphonse and neighbouring St François atolls, lagoons, reefs, and surrounding waters for the protection and conservation of marine habitats and biodiversity and to provide economic opportunities for their sustainable use.	
Geographical Description:	This area is located primarily on the shallow water shelf (≤ 200 m) of the Alphonse Group. The boundary was defined by the GoS-UNDP-GEF OIP and is a 21.9 x 9.5-km rectangle encompassing both the Alphonse and St François atolls. It includes all areas below the mean HWM to the area boundary which is not less than 1 km from the reef edge at the closest point.	
Existing Marine Designations:	Foreign Fishing Prohibited Area #5 (Alphonse): 2,799 km^2	
Ecological Description:	The marine habitats of Alphonse and St François atolls harbour a rich biodiversity. The large, reef-rimmed lagoons contain extensive areas of coral reef flats and seagrass beds and St François holds substantial fringing mangrove forest and sand/mudflats. Both lagoons support high levels of invertebrates, fish, and turtles; sea cucumbers are particularly numerous at St François and giant clams *Tridacna* spp. are abundant in Alphonse lagoon. Significant numbers of green *Chelonia mydas* and hawksbill *Eretmochelys imbricata* turtles live and forage in the lagoons of both atolls and St François is believed to be one of the most important foraging areas for green turtles in the western Indian Ocean. The area is an important feeding ground for significant numbers of five seabird and shorebird species, some of which exceed the BirdLife International criteria for designation as an IBA. Coral reef fish families are well represented in both lagoons and on the outer reef slopes. Groupers, snappers, and emperors are particularly abundant. Spawning aggregation sites of the grouper Vyey Masata *Epinephelus polyphekadion* have been situated off Bijoutier and St François and the giant triggerfish *Balistoides viridescens* in the Alphonse main channel. Larger sharks and reef manta rays *Mobula alfredi* are present in moderate numbers. Spinner dolphins *Stenella longirostris* are regularly recorded, and humpback whales *Megaptera novaeangliae* are occasionally seen.	
Summary of Biodiversity Representation:	This area contains 34 biodiversity features. There are 10 of 44 habitat conservation features and 24 of 38 species conservation features: 6 seabirds, 10 cetaceans, 1 deep water, 4 shallow water, 1 BirdLife International IBA, seagrasses, turtle nesting and foraging habitats, and 1 WIOMER site. There is 94% overlap with all cetaceans except orca. WIOMER and frigatebird foraging both cover 100% of the area while seagrasses cover 20%. A small amount of mangrove habitat is found here. Upwelling may provide thermal refuge during warming events.	
Economic Uses:	Marine uses of the site are small-scale ecotourism (620 visitors in 2016–2017) centred on the internationally renowned marine fly fishery in St François lagoon, but also diving, snorkelling, and wildlife watching. Cruise ships (8 of varying size in 2016), charter vessels (10–15 visits per year), and private yachts occasionally visit, by arrangement with IDC. Commercial demersal fishing for groupers, emperors, and snappers and for sea cucumbers on and around the outer reefs of both atolls is undertaken by vessels under licence from SFA. Subsistence fishing is undertaken to feed Alphonse Island residents.	
Possible New Future Uses:	None identified in 2019.	
Comments:	The GoS-UNDP-GEF OIP has held consultations for the OIP areas and received high support for this proposal. The SMSP stakeholders have also recommended high support for this proposal.	

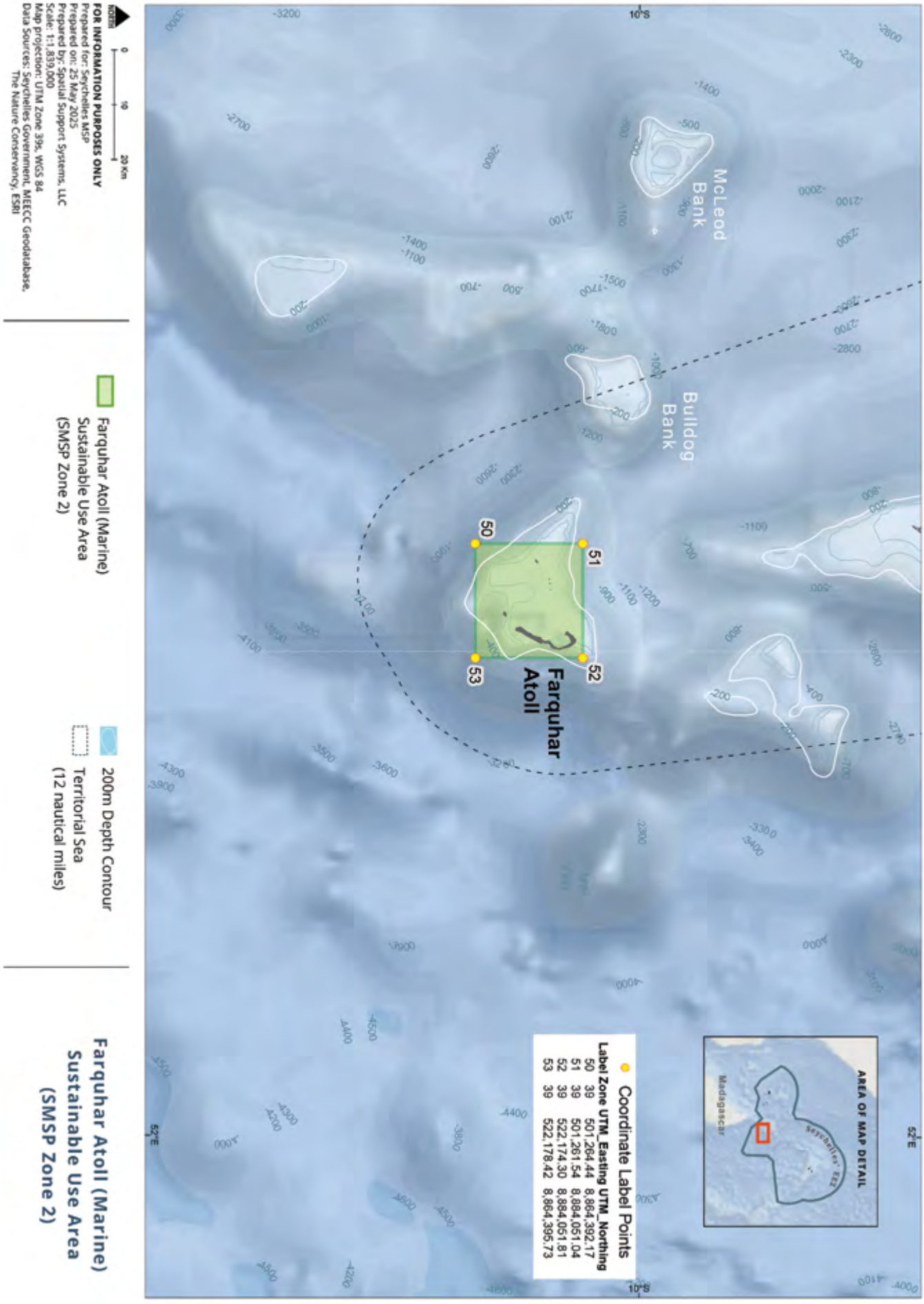
Farquhar Archipelago Marine Sustainable Use Area



Map 17. Farquhar Archipelago Marine Sustainable Use Area, Seychelles.

Gazetted Name: *Farquhar Archipelago (Marine) Sustainable Use Area*		**Size:** 14,482 km^2
Milestone: 3	**Zone:** 2	**Percent of EEZ:** 1.07 %
Primary Objective:	To expand marine protection for representative habitats and species in the Farquhar Group.	
Geographical Description:	This area corresponds to the Providence, Farquhar, and St Pierre, and Wizard Reef Foreign Fishing Prohibited Area (Fisheries Act). This area does not include the Farquhar OIP boundary.	
Existing Marine Designations:	Foreign Fishing Prohibited Area #7 (Providence, Farquhar, St Pierre, and Wizard Reef): 14,897 km^2	
Ecological Description:	This area includes the waters between the atolls in the Farquhar Group. This area contains 6 shallow water habitat types and contains atolls well known for healthy populations of lagoon and reef fish. Deep waters include canyons, seamounts, and mountains; there is complex benthic topography in areas surrounding Farquhar that include Bulldog Bank, Wizard Reef, and part of the Anton Bruun Rise. A westward, equatorial current flows along the bottom portion of the Seychelles EEZ.	
Summary of Biodiversity Representation:	This area contains 47 biodiversity features. There are 19 of 44 habitat conservation features and 28 of 38 species conservation features: 8 seabirds, 13 cetaceans, 9 deep water, 6 shallow water, 1 BirdLife International IBA, seagrasses, turtle nesting and foraging habitats, and 1 WIOMER site. There is 100% overlap with all cetaceans except sei whale at 52% and Risso's dolphin at 99%. WIOMER covers 90% of the area while seagrasses cover 2% and frigatebird foraging covers 8%. Continental slope covers 78% of the area, canyons cover 18%, and abyssal depths cover 12%. The area contains 42% of atoll sea-level rim and 23% of atoll sea-level lagoon in Seychelles.	
Economic description:	Economic uses in this area include artisanal fishing, sport fishing, fly fishing, petroleum exploration and development, and tourism (yacht charters, diving). This area may be an important area as "safe harbour" for artisanal fishing in Outer Islands. There are tourism activities on Farquhar, Providence, and Cerf islands. Tourism accommodation and a radar station on Farquhar were destroyed by Cyclone Fantala in April 2016, and rebuilt.	
Possible New Future Uses:	There have been limited seismic surveys in this area and there is some interest in future surveys or exploration. Future geological scientific research has been proposed by PetroSeychelles for regional seismic surveys with Madagascar.	
Comments:	There is very high support for Farquhar in a Zone 2 to support both conservation and sustainable uses in this area.	

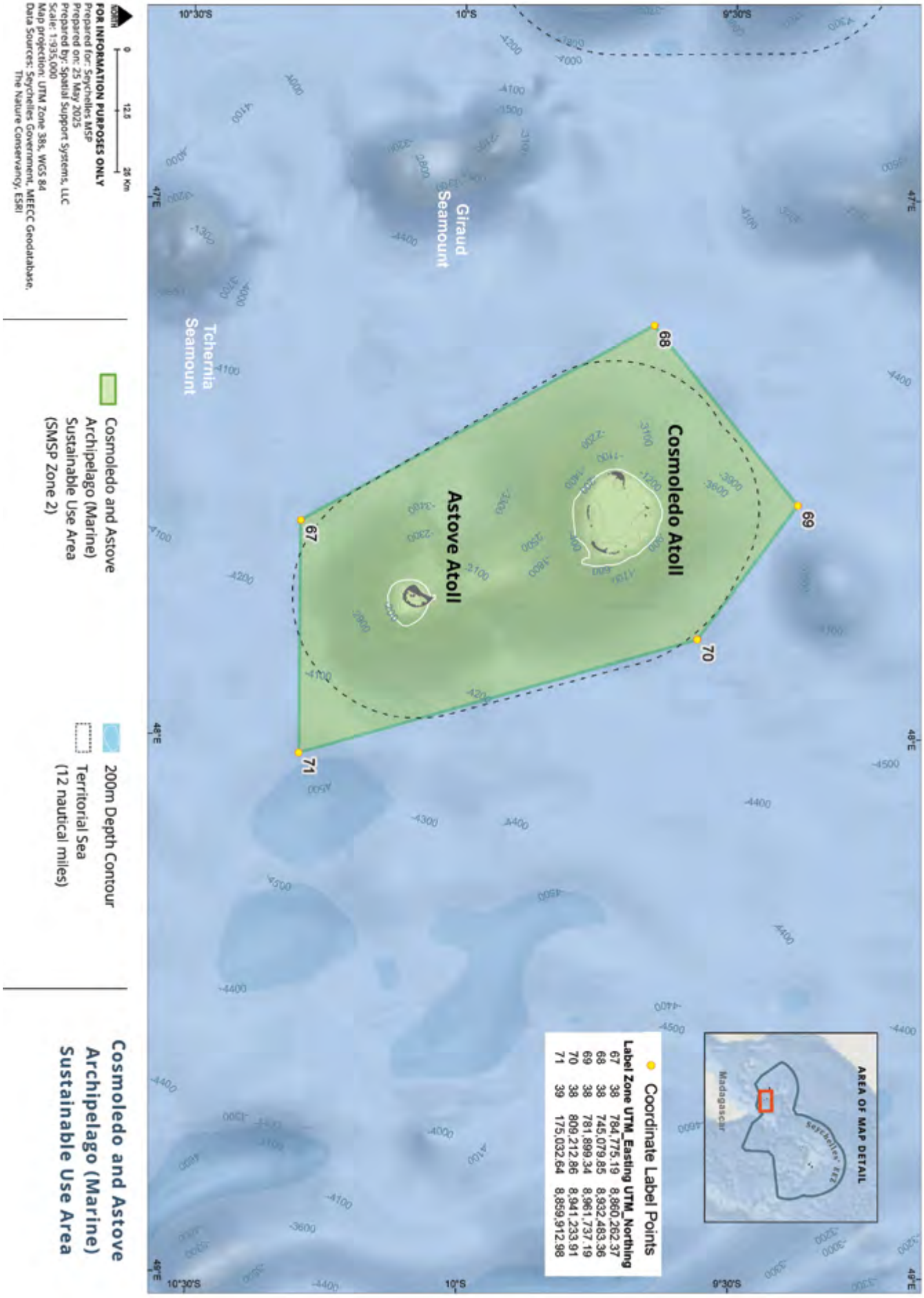
Farquhar Atoll Marine Sustainable Use Area



Map 18. Farquhar Atoll Marine Sustainable Use Area, Seychelles.

Gazetted Name: *Farquhar Atoll (Marine) Sustainable Use Area*		**Size:** 415 km^2
Milestone: 3	**Zone:** 2	**Percent of EEZ:** 0.03 %
Primary Objective:	To protect Farquhar Atoll's lagoons, reefs, and surrounding waters for the protection and conservation of marine habitats and biodiversity and to provide economic opportunities for their sustainable use.	
Geographical Description:	This area is a 20 x 21-km rectangle encompassing Farquhar Atoll, extending not less than 1 km from the outer edge of the reef at the closest point and including all areas below the mean HWM. The boundary includes Farquhar Atoll and Sand Cay, and is approximately 90 km south of Providence, Cerf, and St Pierre islands.	
Existing Marine Designations:	Foreign Fishing Prohibited Area #7 (Providence, Farquhar, St Pierre, and Wizard Reef): 14,897 km^2.	
Ecological Description:	Farquhar lagoon is considered one of the most topographically complex in the world with over 16,000 ha of reef. At low tide, the reef flats form a network of shallow pools, channels, sandbars, and banks. The lagoon is an important foraging area for Black-naped Terns (*Sterna sumatrana)*, Farquhar having the largest known colony (c.140 pairs) in the African region. The atoll is recognised as an Important Bird and Biodiversity Area (IBA). Extensive seagrass beds and shallow-water coral stands support high densities of crustaceans, molluscs, other invertebrates and fish. The slow-growing encrusting corals (*Porites* sp. and *Montipora* sp.) predominate and are considered relatively resilient to bleaching events. Pelagic fish species include flying fish, tuna, and billfish. Large sharks, marine mammals, and foraging seabirds are found in offshore waters. The main channel and west of the atoll are spawning aggregation sites for three species of grouper and two species of triggerfish. The size and number of groupers, snappers, and trevallies are among the highest in the Indian Ocean and the numbers of Napoleon wrasse *Cheilinus undulatus* and bumphead parrotfish *Bolbometopon muricatum*, both IUCN threatened species, are exceptional; the Napoleon wrasse density may be the highest in the world. Reef manta rays *Mobula alfredi* and stingrays are present in good numbers and spinner dolphins *Stenella longirostris* are regularly seen.	
Summary of Biodiversity Representation:	This area contains 38 biodiversity features. There are 11 of 44 habitat conservation features and 27 of 38 species conservation features: 7 seabirds, 13 cetaceans, 2 deep water, 4 shallow water, 1 BirdLife International IBA, seagrasses, turtle nesting and foraging habitats, and 1 WIOMER site. This area has 92% overlap with all cetaceans. WIOMER covers 100% and seagrasses cover 25%. Atoll sea-level lagoon covers 25% of the area while coral reef structures cover 52%.	
Economic Description:	Farquhar is an internationally recognised saltwater fly fishing location with up to 10 fly fishing guests per week September–May. Species targeted in the Farquhar reef flats include bonefish *Albula vulpes*, giant trevally *Caranx ignobilis*, milkfish *Chanos chanos*, triggerfish *Balistoides* spp., and pompano *Trachinotus blochii*. Diving, snorkelling, and wildlife watching are also popular activities. Cruise ships, charter vessels, and private yachts visit occasionally by arrangement with IDC. Subsistence fishing for island residents is carried out by IDC. Commercial demersal fishing for snapper, emperors, and groupers, and sea cucumbers occurs around the atoll reefs; vessels are licensed by the SFA. Survey vessels would not operate within 5 km of the atoll's coast; the proposed MPA boundary is 7.8 km from the reef at its furthest point. The radar station on Farquhar was damaged by Cyclone Fantala in April 2016 and repaired.	
Possible New Future Uses:	Limited seismic surveys have taken place in this area but there is interest in future surveys or petroleum exploration. This is an Area of Interest for PetroSeychelles. The SFA may require access for removal of 6–8 "brood" groupers–brown-marbled grouper (*Epinephelus fuscoguttatus*) and the camouflage grouper (*Epinephelus polyphekadion*)–per season from spawning aggregations for private-enterprise fin-fish farming in the Inner Islands.	
Comments:	The GoS-UNDP-GEF OIP has held consultations for the OIP areas and received high support for this proposal. The SMSP stakeholders have also recommended high support for this proposal.	

Cosmoledo and Astove Archipelago Marine Sustainable Use Area



Map 19. Cosmoledo and Astove Archipelago Sustainable Use Area, Seychelles.

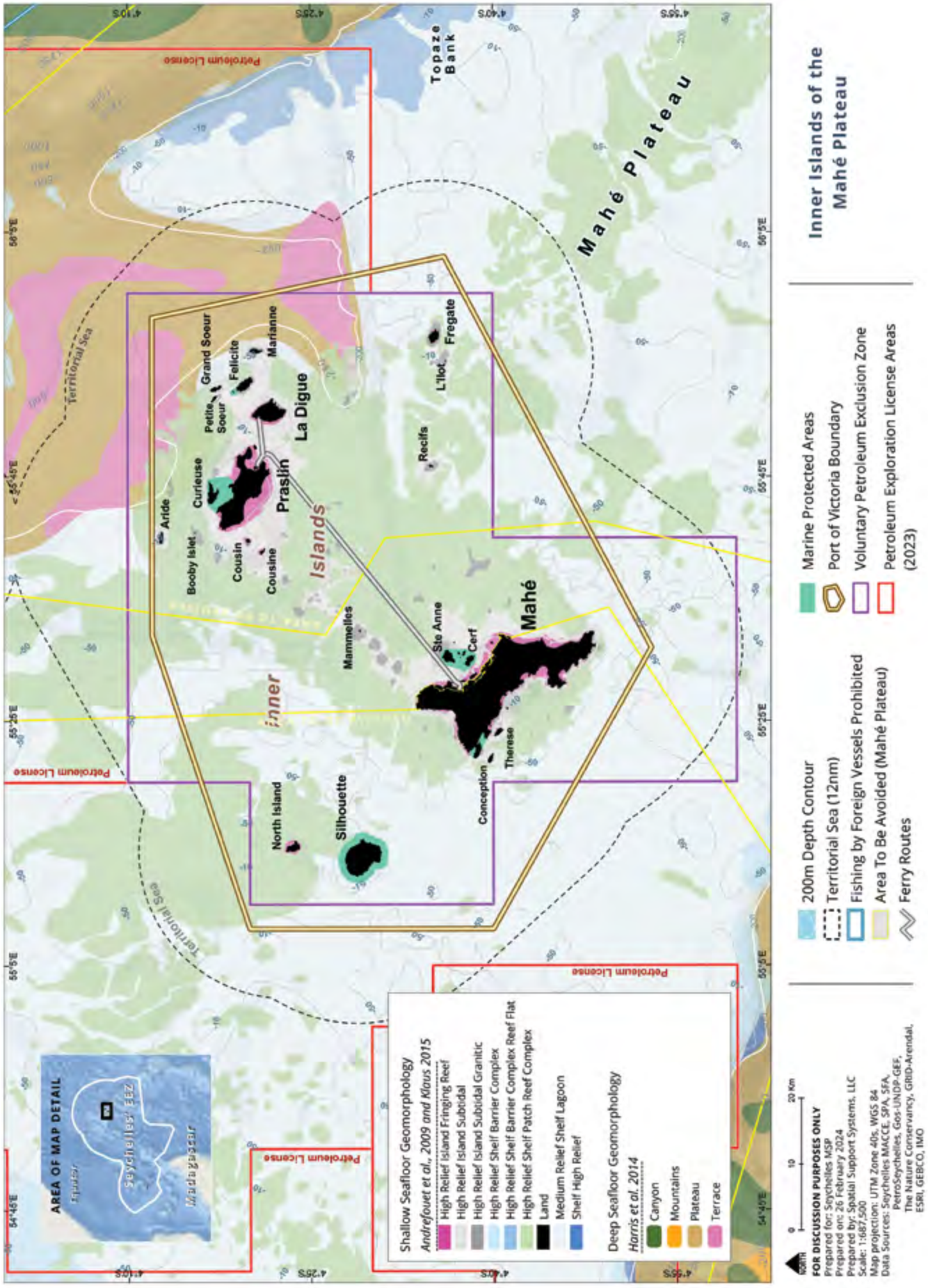
Gazetted Name: *Cosmoledo and Astove Archipelago (Marine) Sustainable Use Area*		**Size:** 5,321 km^2
Milestone: 3	**Zone:** 2	**Percent of EEZ:** 0.39 %
Primary Objective:	To expand marine protection for representative habitats and species in the pelagic waters around Cosmoledo and Astove Islands.	
Geographical Description:	This area boundary corresponds to the Cosmoledo and Astove Foreign Fishing Prohibited Area #8 (Fisheries Act). The area is approximately 400 km west of Farquhar.	
Existing Marine Designations:	Foreign Fishing Prohibited Area #8 (Cosmoledo and Astove Islands): 5,321 km^2 Radar station on Astove.	
Ecological Description:	This area represents pelagic waters and shallow waters surrounding the Cosmoledo and Astove atolls. This area contains 2 shallow water habitat types. In deep waters, it includes canyons, continental slope, and abyssal plains and hills. There are Overlaps with WIOMER and BirdLife Important Bird Areas. A westward, equatorial current flows along the bottom portion of the Seychelles EEZ. The reefs of Astove are the most spectacular in Seychelles (IDC) and have been named "the most spectacular in the world" by underwater photographer Stan Waterman. Green turtles *Chelonia mydas* breed on Astove. Cosmoledo hosts the largest seabird colony in Seychelles.	
Summary of Biodiversity Representation:	This area contains 40 biodiversity features. There are 15 of 44 habitat conservation features and 25 of 38 species conservation features: 5 seabirds, 13 cetaceans, 6 deep water, 4 shallow water, 1 BirdLife International IBA, turtle nesting and foraging habitats, and 1 WIOMER site. There is 100% overlap with all cetaceans except orca (95%). The WIOMER site covers 100% of the area. Canyons cover 7% of the area while continental slope covers 92% and abyssal features cover 22%. This area is identified as a breeding area for both blue and humpback whales. This is a grouper spawning area. A small amount of mangrove habitat is also found here.	
Economic Description:	Minimal artisanal fishing. Sport-fishing, tourism (yacht charters, diving). High value destination for sport-fishing. Independent tour operators and IDC view this area as high value. May be an important area as "safe harbour" for artisanal fishing in Outer Islands. Radar stations to monitor vessel traffic are on Astove.	
Possible New Future Uses:	Tourism development on Cosmoledo and Astove Atolls was featured in the IDC Development Plan (2018–2023) and the updated IDC plan (2024–2029).	
Comments:	Waters surrounding Astove were explored during the Nekton Expedition in April 2019. New deep water coral habitats were located, and submersible transects indicated very high biodiversity compared to other islands or atolls in the EEZ. Reports of illegal fishing have been noted surrounding Astove, especially on the eastern side along the drop-off.	

Note that the final size of the areas does not include land and that previous sizes may be different during the SMSP process owing to how area size was calculated during zoning (planning unit vs. geographical; Table 14).

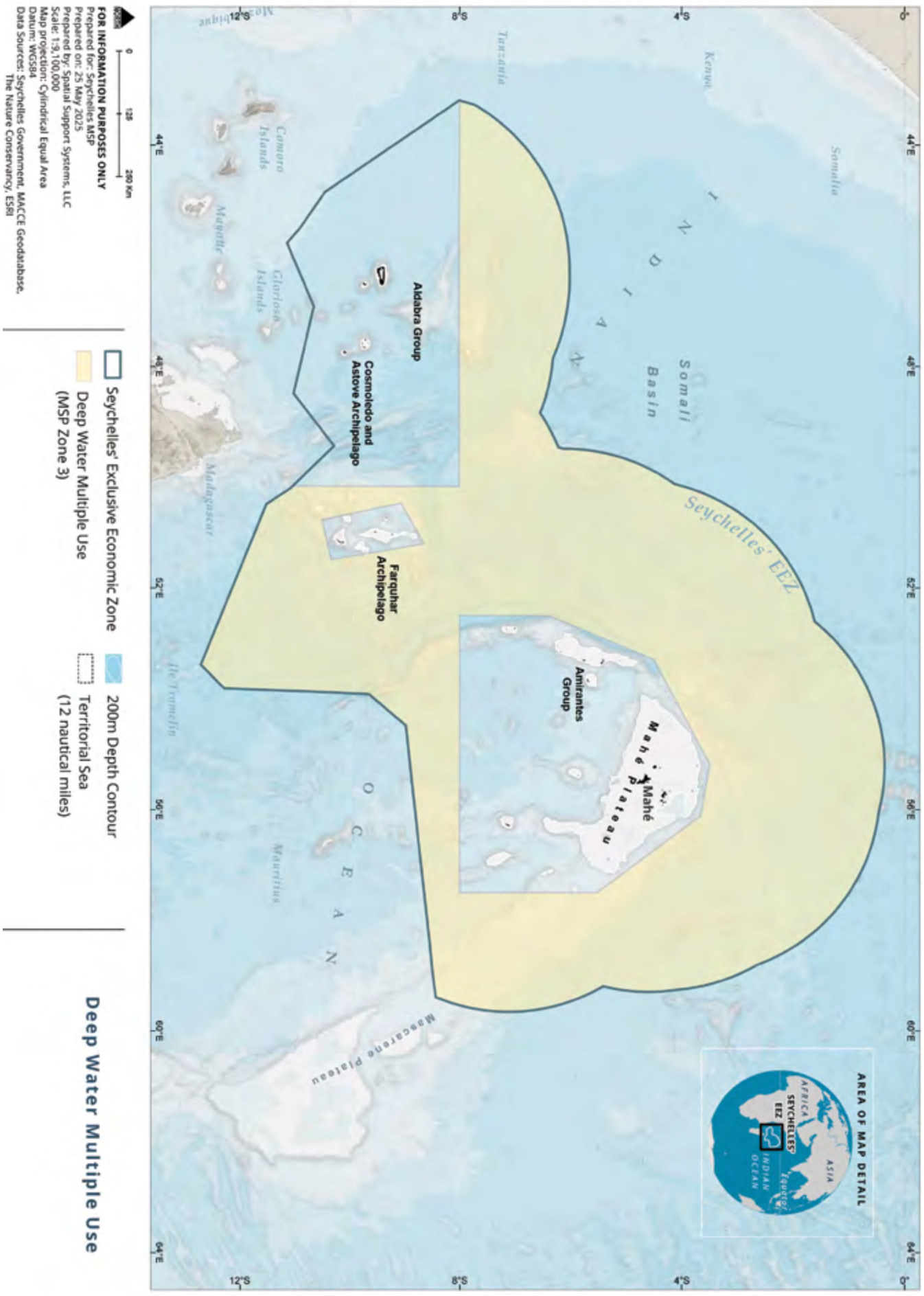
Table 14. Summary of the Seychelles MSP zoning design and the areas gazetted for Milestones 1–3 for a 30% biodiversity protection goal and sustainable economic uses for the entire 1.35 million km^2.

Marine Protection Areas	Area (km^2)	% EEZ
Aldabra Group (Marine) National Park	71,601	5.3
Amirantes to Fortune Bank (Marine) Area of Outstanding Natural Beauty	136,753	10.1
Total Milestone 1	208,354	15.4
Aldabra Group (Marine) National Park	177,435	13.1
Amirantes to Fortune Bank (Marine) Area of Outstanding Natural Beauty	173,468	12.8
Total Milestone 2	350,903	25.9
Aldabra Group (Marine) National Park	201,224	14.88
Bird Island (Marine) National Park	105	0.008
D'Arros (Marine) National Park	23.4	0.002
D'Arros to Poivre (Marine) National Park	370	0.027
Amirantes South (Marine) National Park	1,334	0.1
Amirantes to Fortune Bank (Marine) Area of Outstanding Natural Beauty	217,577	16.1
Denis Island (Marine) Area of Outstanding Natural Beauty	29.6	0.002
Desroches Atoll (Marine) Area of Outstanding Natural Beauty	329	0.024
Poivre Atoll (Marine) Area of Outstanding Natural Beauty	54	0.004
Alphonse Group (Marine) Area of Outstanding Natural Beauty	213	0.016
Farquhar Archipelago (Marine) Area of Outstanding Natural Beauty	14,478	1.07
Farquhar Atoll (Marine) Area of Outstanding Natural Beauty	408	0.03
Cosmoledo and Astove Archipelago (Marine) Area of Outstanding Natural Beauty	5,310	0.39
Total Milestone 3	441,456	32.65

ZONE 3 – MULTIPLE USE AREAS



Map 20. Inner Islands Multiple Use Area, Seychelles.



Map 21. Deep Water Multiple Use Area, Seychelles.

Area-based Management Considerations

The General and Area-based Management Considerations come from legislation, regulations, scientific studies, government reports, unpublished studies, expert advice, and/or best available information. The considerations began in 2014 with the launch of the SMSP and have been updated on an on-going basis as other SMSP outputs were developed and revised. See also the Master List of Definitions, Allowable Activities Tables, and Codes. These were approved by the Executive Committee on 20 May 2024.

ZONE 1 – MARINE NATIONAL PARKS

High Biodiversity Protection Zones

i. Seychelles is counting these spatial areas towards the national commitment of 30% in marine protected areas.

ii. Fish feeding, chumming, or otherwise attracting fish, sharks, or marine animals is only allowed for research purposes; all other purposes are not allowed. Standard methodologies are applied for scientific research for purposes of tagging, photo ID, visual census, and baited remote underwater video (BRUV).

iii. To conserve a high level of marine ecosystem structure and function, as well as to protect adjacent terrestrial ecosystems, fishing by floating objects will not be allowed. Fish Aggregating Devices (FADs) and other floating objects or structures that are used for the purposes of attracting fish will be phased out. The process for phasing out fishing by floating objects will be developed in consultation with relevant authorities, partners, and stakeholders.

iv. Extraction of natural resources and activities that disturb the seabed are not allowable unless noted in the Allowable Activities Table. Discussions with affected stakeholders are ongoing through implementation, which begins in 2025.

v. To conserve a high level of marine ecosystem structure and function, commercial tourism activities will only be allowable that demonstrate a long-term commitment to ecological sustainability through data gathered by scientific studies, research or other quantifiable methodology or approach. The specific criteria that demonstrate this commitment will be developed in consultation with relevant authorities, partners, and stakeholders. Propose to use standard or best practice Codes of Conduct for tourists interacting with marine life and environments.

vi. The size of cruise ships and a passenger limit may need to be reviewed and developed consistent with management objectives for high biodiversity protection and the types of activities or uses that are compatible with Zone 1 areas.

vii. In the future, floating structures may be allowable in Zone 1 areas if they are deemed to result in less environmental damage than a similar development on land. All construction for floating structures must avoid sensitive, unique, or IUCN red-listed species or habitats, and in accordance with strict environmental standards that do not harm the UNESCO World Heritage Site status of Aldabra Atoll. Floating structures may be from residential, commercial, or non-profit activities.

viii. To support the determination of the extent of Seychelles' continental shelf and mapping of the seabed, geophysical surveys are allowable with conditions and restrictions as noted in the Allowable Activities Table (e.g., JNCC Marine Mammal Guidelines). Discussions with PetroSeychelles are ongoing with respect to proximity of geological surveys to islands or atolls, with a minimum distance of 5 km prescribed in the Petroleum Model Agreement.

ix. All commercial marine tourism activities in these areas are working towards increased sustainability and improved management and will be able to demonstrate their long-term commitment to economic and ecological sustainability during implementation of the MSP, as per the directions in the MSP Implementation Plan. The criteria for sustainability shall include, and are not limited to:

- compliance with all vessel regulations and identification including Hire Craft license registration
- considerations of IUCN red-listed species in the Critically Endangered, Endangered, Vulnerable, and Near Threatened categories and the local information pertaining to the IUCN listings

Aldabra Group (Marine) National Park

- Aldabra (Marine) Special Reserve is a separate boundary from the Aldabra Group (Marine) National Park.
- Aldabra Atoll is a public island managed by Seychelles Island Foundation (SIF). Aldabra Atoll has restricted access for research and visitors because the atoll is designated as a Special Reserve. Seychelles Island Foundation is responsible for the management of Aldabra (Marine) Special Reserve and the UNESCO World Heritage Site.
- Assomption, Cosmoledo, and Astove are public islands and managed by Island Development Corporation (IDC).
- Seychelles Island Foundation (SIF) has an approved management plan for Aldabra (SIF, 2016) and with updates as per their review process. SIF proposes that SMSP zone areas in or around Aldabra Marine Special Reserve follow the conditions in the Aldabra Management Plan (SIF, 2016).
- Aldabra Atoll has been recognised as an outstanding marine protected area with a Platinum-level Blue Park designation by the Marine Conservation Institute in 2019.
- Area-based management for new marine protections will harmonise with existing and all future management plans developed for this area.
- Waters surrounding the atolls and islands have very high fish biomass compared to other islands in Seychelles' Archipelago. Illegal fishing in waters on the eastern side of Assomption is a concern. Illegal, unreported, and unregulated (IUU) fishing has been noted in waters around Aldabra Group.
- Assomption, Cosmoledo, and Astove have airstrips and other infrastructure on land or in the water (e.g., jetties) that can aid for the management of this area.
- Future development on Assomption may include a small tourism guesthouse facility on land and a refurbished or new pier for the Coast Guard (Outer Islands Development Plan 2018–2023; Annex II, IDC).
- Cosmoledo (2015–2020) and Astove (2016–2021) have management plans that need updating.
- There is no management plan for Assomption yet.
- A management unit boundary has been proposed around Assomption Island for co-management as proposed by IDC in November 2022. The management unit boundary was guided by the July 2019 draft zone boundary around Assomption that extended to and included habitat features in entirety (shelf, high relief, and high-relief bank) and the 200-m depth contour.
- A proposal was developed by the government for an International Maritime Organisation (IMO) Particularly Sensitive Sea Area (PSSA) for the waters surrounding Aldabra Atoll. This was proposed by the SMSA in 2017 in consideration of the fragile and sensitive nature of the Aldabra Atoll habitats and to minimise risks from ship collisions or spills in waters surrounding the atoll.
- Management Units with Aldabra Group:
    - Assomption: The beaches on Assomption are some of the nicest in Seychelles and are very important for nesting green turtles. Management of disturbance to nesting turtles including artificial lights, noise, and changes to beaches or dunes will need to be evaluated for impact to sea turtles.
- Access to Assomption Island is needed to maintain a radar station for the Seychelles Maritime Safety Authority (SMSA) and Seychelles Coast Guard. Assomption can be used for customs clearance in the Outer Islands.

Bird Island (Ile aux Vaches) (Marine) National Park

- Bird Island is privately owned and managed. The owners were consulted during Phase 1 and Phase 2 of the SMSP and supported a Zone 1 area. The shape of the boundary was developed in consultation with the owners and SMSP stakeholders.
- Safe haven is allowable for all vessels in bad weather.
- Subsistence fishing for owners and island residents takes place.
- Sooty Terns breeding on Bird Island have been tracked to Coco de Mer seamount and waters very distant from the island using satellite tags on the birds (breeding and juveniles). Dr. Chris Feare and co-investigator Rachel Bristol have provided tracking data to the SMSP for Milestone 3. SeyCCAT funded a project for a Sooty Tern study and the tracks were used to inform Milestone 3 zones.
- Sport fishing, semi-industrial and artisanal fishing along the drop-off has been noted by stakeholders as important. The boundary for this area was proposed because of very low levels of fishing in this area relative to the drop-off and other locations on the Mahé Plateau.
- PetroSeychelles has provided information that they will voluntarily avoid exploration within 5 km of Bird Island.
- Subsistence fishing would not be allowable around Bird Island because there is a private residence, research, AND a commercial aspect (the eco-resort).

D'Arros (Marine) National Park

- D'Arros Island is privately owned and co-managed by Chelonia and the Save Our Seas Foundation (SOSF).
- D'Arros Research Centre is on D'Arros Island. The Save Our Seas Foundation D'Arros Research Centre (SOSF-DRC) undertakes all research and conservation on and around D'Arros and St Joseph Atoll and is the main representative for anything MPA related.
- Safe haven is allowable for all vessels in bad weather. Moorings are provided at D'Arros and should be used whenever and wherever possible. If moorings are not used, disturbance and damage to the seabed and habitats should be minimised.
- Shark feeding is prohibited by Seychelles fishing regulations and needs to be monitored and enforced at D'Arros. Bait (e.g., chum) may be used for research projects on marine predators at D'Arros and elsewhere in Seychelles. A range of standard methodologies that require bait are important to conservation and scientific research at D'Arros and other areas important for sharks such as St Joseph.
- Aggregations of manta rays may be of national significance and managed for specifically in a management plan. Long-term scientific studies at D'Arros Research Centre have documented ray aggregations and residency, with some individuals frequently traveling across the Amirantes Bank and some swimming as far as the Alphonse Group.
- Subsistence fishing occurs but only offshore and beyond the boundary of the Zone 1 area.
- D'Arros Island is an important nesting site for the critically endangered hawksbill turtle and beach use by tourists will have to be controlled during the main nesting season in order to minimize disturbance to nests and nesting events. Further, the management plan will have to take into consideration that individual turtles may emerge at D'Arros Island and St Joseph Atoll in the same season.
- Anchoring and non-anchoring zones will come into effect.
- A management plan is being developed for D'Arros (Marine) National Park.

D'Arros to Poivre (Marine) National Park

- Poivre Island is a public island managed by Islands Development Corporation (IDC).
- D'Arros Island is privately owned and co-managed by Chelonia and the Save Our Seas Foundation (SOSF).
- Save Our Seas Foundation is maintaining an acoustic array for research and monitoring of tagged marine animals near D'Arros Island and St Joseph Atoll.
- Save Our Seas Foundation may have research interests in the area in the future.

Amirantes South (Marine) National Park

- Within the Amirantes South area, Marie-Louise, Etoile, Boudeuse, and Desnoeufs are public islands managed by IDC. Etoile and Boudeuse have restricted access because they are Nature Reserves. Etoile and Boudeuse were managed by IDC beginning in November 2022.
- Fishing for Napolean wrasse, an IUCN red-listed species, has been noted in this area.
- Egg harvesting of Sooty Terns on Desnoeufs is a terrestrial activity, yet concern from stakeholders about sustainability of egg harvesting has been noted several times.
- The Save Our Seas Foundation maintains acoustic research monitoring equipment throughout the waters of the park that undergo regular maintenance.

ZONE 2 – SUSTAINABLE USE AREA

Medium Biodiversity Protection and Sustainable Use Areas

- Seychelles is counting these spatial areas towards the national commitment of 30% in marine protected areas.
- The protection of nature is an important primary objective of this protected area category as per the Global Biodiversity Framework, with allowable activities that demonstrate sustainability.
- The IDC has delegated authority to manage 16 public islands in the Outer Islands. The islands are managed for conservation and tourism, both for local and international tourists. Use of the lagoons and waters surrounding the islands is important for marine-based tourism activities including fly fishing, sport fishing, SCUBA, and snorkeling.
- Private marine charter companies as well as individual sport fishing are important economic and recreation activities in Seychelles' Outer Islands. Other marine activities include SCUBA, snorkeling, jet skiing, and wildlife watching.
- Concerns have been raised about the possible negative impacts of any future mariculture in the lagoons of the Outer Islands. There are also concerns for land-based mariculture and effects of discharge, additional nutrients, or wastewater into the ocean.
- The GoS-UNDP-GEF consultations for Desroches, Poivre, Alphonse, and Farquhar indicated that any new marine protections should not lead to the exclusion of either independent operators or visitors to the islands or waters surrounding the islands. All management plans and regulations should be realistic for these areas.
- Management plans were developed for the GoS-UNDP-GEF OIP areas through a participatory and consultative process. Draft Allowable Activities are consistent with the SMSP consultations for other Zone 2 areas for Medium Biodiversity and Sustainable Uses. Allowable Activities may have specific conditions for OIP areas.
- Business plans were developed for the GoS-UNDP-GEF OIP areas.
- Fly fishing in the Desroches, Poivre, Alphonse, and Farquhar lagoons are currently catch and release. Stakeholder agreement was reached during consultations that this is allowable for SMSP Zone 2 areas and may be subject to conditions. Fly fishing and catch and release must follow best practices and discussions with the fly fishing community are ongoing to ensure sustainability and global best practices are being used.
- All allowable fishing activity in Zone 2 areas must be working towards, or have achieved, a high standard of sustainability during the implementation of the Plan. Note: high standard of sustainability needs to be defined. Examples include Fisheries Improvement Plans (FIP), sustainability standards or certifications, and scientific studies to document sustainability of activities such as catch and release.
- All commercial marine tourism activities in these areas are working towards increased sustainability and improved management and will be able to demonstrate their long-term commitment to economic and ecological sustainability during implementation of the Plan, as per the directions in the SMSP Implementation Plan. The criteria for sustainability shall include, and are not limited to:
    - compliance with all vessel regulations and identification including hire craft license registration

  - catch reporting including catch and release
  - code of conduct for sport fishing catch and release allowable activities
  - compliance with all rod limits in the Outer Islands
  - considerations of IUCN red-listed species in the Critically Endangered, Endangered, Vulnerable, and Near Threatened categories and the local information pertaining to the IUCN listings
- The approach for improving fishing activity sustainability in this Zone category is to develop criteria for sustainability during consultations for Milestone 2, Milestone 3, and during completion of the Marine Spatial Plan. Sustainability criteria for allowable activities will be developed in consultation with relevant authorities, partners, subject matter experts, and stakeholders so that they are used during MSP Implementation. The criteria may include regulations for:
  - vessel identification and tracking: Electronic Monitoring Systems (EMS), Vessel Monitoring Systems (VMS)
  - a FAD management plan including use, tracking, and recovery of FADs will be developed in consultation with relevant authorities, partners, and stakeholders
  - reduce or avoid bycatch of non-target organisms

Amirantes to Fortune Bank (Marine) Sustainable Use Area

- This area contains six Fishing by Foreign Vessels Prohibited Areas (Fisheries Act).
- Management plans have been developed for some fisheries on the Mahé Plateau. Additional management plans are needed for sea cucumber and other species, especially in the Amirantes.
- Temporal closures may be present in this area to protect whale shark aggregations, spawning aggregations, nurseries, and breeding sites for seabirds, sharks, and sea turtles, and other seasonal animal behaviours.
- Tourism development is planned by IDC for islands within this area that are publicly owned.
- Constance Bank is an important artisanal fishing location in some years.
- Piracy threat can affect the distribution and access of domestic fishing vessels. During high piracy threat years, fishing effort is directed south of the Inner Islands.
- This contains an Area of Interest for PetroSeychelles. There are active licensed blocks on the Mahé Plateau.
- A new resort is planned for Coëtivy and Platte Islands.
- St Joseph Atoll
  - St Joseph Atoll is within Amirantes to Fortune Bank. It is an atoll that is privately owned and co-managed by Chelonia and SOSF. It is a documented nursery site for sharks, rays, and reef fish, and contains important habitat for juvenile sea turtles, nesting sea turtles, and humphead wrasse. The D'Arros Research Centre conducts scientific research in and around St Joseph Atoll and long-term data sets exist. Tourism activities shall follow specific conditions of MPA management plans to mitigate any impacts on wildlife.
  - St Joseph Atoll is a particular area within Amirantes to Fortune Bank that might require special considerations due to its high ecological value. It is a popular destination for fly fishing activities.
  - St Joseph Atoll provides a unique site within this large Zone 2 area that contains a shallow atoll with lagoon and islands, and is reef-fringed, different from deep water areas in this zone. St Joseph has high ecological value as a nursery site for vulnerable and endangered species of sharks, three species of rays, wedge-tailed shearwater *Ardenna pacifica* colonies, and large populations of juvenile and nesting green *Chelonia mydas* and hawksbill sea turtles *Eretmochelys imbricata*. More than 20 species resident to St Joseph are threatened with extinction.
  - St Joseph is the most important location in the Western Indian Ocean for the critically endangered hawksbill turtle – hundreds of hawksbills nest here and thousands forage here. There are also thousands of endangered green turtles, and it is the only place in Seychelles where both green and hawksbill turtles can be found foraging and nesting.

- St Joseph has one of the largest populations of the endangered humphead wrasse *Cheilinus undulatus* in Seychelles, and they use the atoll reefs almost exclusively. St Joseph is home to the bottlenose wedgefish *Rhynchobatus australiae*, one of the most critically endangered rays in the world. Vulnerable shortjaw bonefish *Albula glossodonta* are common, but data show it is not common for them to survive when released after being caught. Baby sharks including endangered sicklefin lemon sharks *Negaprion acutidens*, turtles, rays, and fish such as giant trevally *Caranx ignobilis* live in the atoll almost exclusively before maturing.
- St Joseph Atoll is like a mini-Aldabra—it is near pristine with exceptional biodiversity and has a shallow lagoon that is completely cut off at low tide. This makes it a very special nursery habitat, unlike any other in the Amirantes or Inner Islands. As a nursery, commercially and recreationally valuable fish species rely on St Joseph to help populations across the Amirantes Bank and beyond to recover. Numerous scientific studies and publications exist based on marine research in and around St Joseph Atoll.
- The SOSF proposed an Allowable Activity Table for St Joseph Atoll, which was developed with stakeholders in July 2022. In March 2023, the SMSP Steering Committee recommended to have just one Zone 2 Table for all eight Sustainable Use Areas, with Area-based Management Considerations documented for St Joseph and Denis islands.

- IDC informed the SMSP that they are responsible for the African Banks Protected Area (16 November 2022). IDC proposed a management unit within Amirantes to Fortune Bank (Marine) Sustainable Use Area that includes African Banks and Rémire Islands, and the waters in between.
- A management plan for Amirantes to Fortune Bank (Marine) Sustainable Use Area was developed (2022–2023; C_2O Consulting) and endorsed by the MACCE in 2024.
- Owing to its large area and interest from potential co-managers, four management units were proposed within Amirantes to Fortune Bank Sustainable Use Area as of November 2022 for co-management agreements and these were approved in February 2025 by the Executive Committee. Each management unit has defined geographic coordinates:
  - African Banks to Rémire: the waters between African Banks Protected Area to Rémire Island. See Zone 2 Allowable Activities Table.
  - St Joseph Atoll: the waters surrounding St Joseph Atoll. All allowable activities including sport fishing and commercial fishing must demonstrate sustainability and compatibility with the nature biodiversity protection objective for the zone including related to impacts to non-target species, shark populations, and active research projects including tagging, underwater surveys, and long-term studies. Sustainability criteria will be developed in the management plan for this zone, and/or the management plan for the St Joseph management unit.
  - Coëtivy: the waters surrounding Coëtivy Island. See Zone 2 Allowable Activities Table.
  - Platte: the waters surrounding Platte Island. See Zone 2 Allowable Activities Table.

Denis Island (Marine) Sustainable Use Area

- Denis Island is a privately owned island with a luxury resort owned by Denis Island Development Pty (Ltd). Green Islands Foundation (GIF) is a non-government organisation involved in the conservation management of small islands that are privately owned, including Denis Island. GIF is responsible for the scientific research component of all conservation activities on Denis Island.
- Safe haven is allowable for all vessels in bad weather.
- Sport fishing is an important economic activity for tourists and visitors to Denis Island.
- This marine area is within a Fishing by Foreign Vessels Prohibited Area (Fisheries Act).
- Green Island Foundation proposed an Allowable Activity Table for Denis Island (Marine) Sustainable Use Area, which was developed with stakeholders in 2022. Recommendations from the SMSP Steering Committee to Executive Committee in 2023 resulted in removing the separate column in the Allowable Activity Table for Denis Island (Marine) Sustainable Use Area and creating one table for all Zone 2 areas.
- A management plan was developed for Denis Island (Marine) Sustainable Use Area (2023).

Desroches (Marine) Sustainable Use Area

- Desroches Island is publicly owned.
- The Desroches Foundation oversees and finances the conservation and management of the terrestrial environment. The Foundation is comprised of IDC, ICS, and investors. The Foundation has expressed a commitment to manage or co-manage the surrounding waters as a (Marine) Sustainable Use Area or protected area, with the necessary support for surveillance and enforcement.
- Consultations for this marine area were undertaken by SMSP and the GoS-UNDP-GEF OIP. Desroches has a management plan drafted under the OIP (2018–2022).
- Consultations facilitated by GoS-UNDP-GEF identified that it was supported by stakeholders that jet skis will not be allowable in this area.
- Beach replenishment activities take place at Desroches.

Poivre (Marine) Sustainable Use Area

- Poivre Island is publicly owned.
- The Poivre Foundation oversees and finances the conservation and management of the terrestrial environment. The Foundation is comprised of IDC, ICS, and investors. The Foundation has expressed a commitment to manage or co-manage the surrounding waters as a (Marine) Sustainable Use Area or protected area, with the necessary support for surveillance and enforcement.
- Consultations for this marine area were undertaken by SMSP and the GoS-UNDP-GEF OIP. Poivre has a management plan drafted under the OIP (2018–2022).
- Consultations facilitated by GoS-UNDP-GEF identified that it was supported by stakeholders that jet skis will not be allowable in this area.

Alphonse Group (Marine) Sustainable Use Area

- Alphonse and St François atolls are publicly owned.
- The Alphonse Foundation oversees and finances the conservation and management of the terrestrial environment. The Foundation is comprised of IDC, ICS, and investors. The Foundation has expressed a commitment to manage or co-manage the surrounding waters as a (Marine) Sustainable Use Area or protected area, with the necessary support for surveillance and enforcement.
- Consultations for this marine area were undertaken by SMSP and the GoS-UNDP-GEF OIP. Alphonse has a management plan drafted under the OIP (2018–2022).
- Consultations facilitated by GoS-UNDP-GEF identified that it was supported by stakeholders that jet skis will not be allowable in this area.
- Blue Safari operates fly fishing and other marine tourism in the Alphonse Group.

Farquhar Atoll (Marine) Sustainable Use Area

- Farquhar Atoll is publicly owned. The Farquhar Foundation oversees and finances the conservation and management of the terrestrial environment. The Farquhar Foundation is comprised of IDC, ICS, and investors.
- The Farquhar Foundation has expressed a commitment to manage or co-manage the surrounding waters as a (Marine) Sustainable Use Area or protected area, with the necessary support from the government for surveillance and enforcement.
- Consultations for this marine area were undertaken by SMSP and the GoS-UNDP-GEF OIP. A management plan for Farquhar Atoll (Marine) Sustainable Use Area was drafted under the OIP (2018–2022).
- Consultations facilitated by GoS-UNDP-GEF OIP identified that it was supported by stakeholders that jet skis will not be allowable in this area.
- Blue Safari operates fly fishing and other marine tourism at Farquhar Atoll. Blue Safari has invested in terrestrial infrastructure for marine tourism.

Farquhar Archipelago (Marine) Sustainable Use Area

- The islands in the Farquhar Archipelago are publicly owned. The IDC manages the islands for conservation and tourism.
- The deep-water areas are important for marine charters, domestic fishing, and an Area of Interest for PetroSeychelles.
- The shallow waters and lagoons are important for marine charters, fly fishing, and eco-tourism.
- Geological seismic surveys may take place in this area during a regional study for the seabed from Madagascar to Seychelles. Seismic surveys for geological scientific study are allowable, with conditions to avoid damage to species especially cetaceans.
- IDC is interested in co-management for this area.
- A management plan for Farquhar Archipelago (Marine) Sustainable Use Area has been developed (2022–2023; C_2O Consulting).

Cosmoledo and Astove Archipelago (Marine) Sustainable Use Area

- Cosmoledo and Astove islands are publicly owned. The IDC manages the islands for conservation and tourism.
- Astove Island has a radar station.
- There are reports of illegal fishing activity in these archipelagic waters.
- The Cosmoledo and Astove Foundation plans to establish conservation centres soon to oversee and finance the conservation and management of the terrestrial environment. The Foundation is comprised of IDC, ICS, and investors. The Foundation has expressed a commitment to manage or co-manage the surrounding waters as a (Marine) Sustainable Use Area or protected area, with the necessary support for surveillance and enforcement.
- IDC is interested in co-management for this area.
- A management plan for Cosmoledo and Astove Archipelago (Marine) Sustainable Use Area has been developed (2022–2023; C_2O Consulting).

ZONE 3 – MULTIPLE USE

- This zone category includes two marine areas that were not legally designated as new marine zones in the SMSP Initiative: the Inner Islands and all deep water outside the marine protection areas. The Inner Islands area has the same as the boundary of the official Port of Victoria and includes the pre-SMSP marine protected areas. The deep water area is everywhere else that is not Zone 1 or 2 in the Outer Islands or Zone 3 Inner Islands.
- General Management Considerations apply to Zone 3.
- Bioprospecting in these areas requires a Seychelles Benefit and Access Sharing Agreement.
- As of May 2024, Seychelles is developing an official position on deep-sea mining for mineral resources.

Inner Islands

- The waters within the Port of Victoria boundary contain existing marine protected areas as well as waters that are not zoned or designated.
- In consideration of dive sites within the Inner Islands, and to specifically manage spatial conflicts between diving and fishing activities, a management plan was proposed for the Inner Islands. And, in general, improved management needed in consideration of the multiple values at dive sites including eco-tourism and the economic value of non-extractive and extractive activities.

Deep Water

- These are the deep waters (> 200 m) that are not within Zone 1, Zone 2, or the Inner Islands.
- Bunkering at sea for fishing vessels is allowed and would be done with local vessels and companies.

MASTER LIST OF DEFINITIONS

The Master List of Definitions is a list of uses, activities, and terms with their definitions and/or descriptions in support of the SMSP as it pertains to Allowable Activities Tables, General and Area-based Management Considerations, Codes, and other outputs. The list and definitions began in 2014 with the launch of the SMSP and have been updated on an ongoing basis as other SMSP outputs were developed and revised.

The list of definitions was developed with all stakeholders including SMSP committees, Technical Working Groups, and topic experts. The descriptions were not intended to define thresholds or acceptable intensity of use because these vary from place to place and are, or may be, determined by management plans and/or regulations. Wherever possible, a published or authoritative description or definition was used; those without a source were a local or general description of the use or activity. The Master List of Definitions was finalised in May 2024 when the Executive Committee approved the Allowable Activities Tables. Terms in bold are used on the Allowable Activities Tables in the Marine Activity column. Terms in italics are provided to support the terms in bold, where needed.

The Master List of Definitions will need to be updated or revised when associated legislation or regulations change the definition of terms on this list and/or adds new ones that would change other terms. The Master List of Definitions is in an Annex.

Gazetting Marine Zones

The nomination process to gazette the new marine protection areas was similar for all three Milestones. For all three Milestones, the National Park and Nature Conservancy Act (NPNCA) of 1969 was used for the designation of Protected Areas. In Milestone 1, two areas were nominated for Protected Area designation under the NPNCA: Aldabra Group was nominated for a National Marine Park and Amirantes to Fortune Bank was nominated as an Area of Outstanding Natural Beauty (AONB). The AONB category was used because the NPNCA did not have a sustainable use category for the Seychelles MSP Initiative; the AONB category was the best 'place holder' for the zoning framework's Zone 2 category. This aligned with discussions for the need for a sustainable use category. Simultaneous to the SMSP process was the revision of the NPNCA to a new Act—The Nature Reserves and Conservancy Act (NRCA) of 2022.

The steps for the legal designation of the MSP Marine Protection Areas were developed in 2016 and updated in October 2019 to sign into law the marine protected areas (Zone 1 and 2 areas) using the NPNCA. The steps include those described by law for gazetting a new MPA.

1. Executive Committee – Approval for consultations on Milestone 3 zoning design options; approve SMSP Core Team to prepare Cabinet Memorandum for MEECC present to Cabinet for approval to prepare Nomination File MSP Milestone 3
2. SMSP Core Team – Prepare Cabinet Memorandum
3. Ministry MEECC – Submit Cabinet Memorandum to Cabinet one (1) week in advance.
4. Steering Committee – Comments on Milestone 3 zoning options; directions to TWG
5. Technical Working Groups – Review zoning options; prepare draft Allowable Activities
6. Sector consultations – Review, inform, and reach agreement on design proposals
7. SMSP Core Team – Revise draft outputs based on information, input, and advice
8. Steering Committee – Review recommendations and approve revisions on draft outputs
9. Public Workshops – Informing and input on Milestone 3 zoning design and outputs
10. Sector consultations – Informing and input on Milestone 3 zoning design and outputs
11. SMSP Core Team – Revise draft outputs based on information, input, and advice
12. Executive Committee – Review and discuss recommendations from stakeholders for Milestone 3; approval of Milestone 3 Areas to present to Cabinet
13. SMSP Core Team – Presentation of Cabinet Memorandum to Cabinet on behalf of MEECC
14. Cabinet – For decision: approval for MEECC to prepare Nomination File MSP Milestone 3
15. SMSP Core Team – Prepare Nomination File (text, coordinates, maps, Annexes)
16. SMSP Core Team – Submit Nomination File to MEECC
17. Ministry MEECC – Submit Nomination File to Attorney General of the Government of Seychelles
18. Director General MEECC – Post Notice of Intent to declare to gazette
19. SMSP Core Team – Post Notice of Intent and Nomination File on SMSP website
20. Director General MEECC – Public review, 28 working days
21. Director General MEECC – Address public comments on Nomination File MSP Milestone 3
22. Ministry MEECC – Finalise Nomination File MSP Milestone 3
23. Ministry MEECC – Prepare Designation Order for legal gazette
24. Minister MEECC – Sign Designation Order for Milestone 3 areas, areas gazetted into law

CHAPTER 4: Implementation of the SMSP

This chapter lays the foundation for the development of an Implementation Plan for the Seychelles MSP. The SMSP is a government-led process and ownership of the Plan is with the government. It is important for Seychelles to have ownership of the Plan and associated data inputs and technical outputs, including the SMSP Atlas. Implementation will include new research activities to support management of the areas and a road map for implementation. A legal roadmap was developed in 2022 to assist with implementation. Over time, there may not be awareness that there are data, maps, and other outputs available to support implementation, thus the importance of the public education activities in the SMSP Policy document. Also, the implementation of the SMSP will create opportunities for increased training and capacity for marine and maritime careers.

An implementation plan is very important and typically will cover many topics including governance structures, financing, and monitoring, evaluation, and learning (MEL). The SMSP implementation plan should include a list of implementation priority projects with estimated costs, the surveillance and monitoring options for each marine protection area, and the associated costs for effective management. Implementation plans also include reference to the legislative and policy instruments to enforce the activities associated with a marine plan, as well as research priorities for the monitoring of the Plan and the environment, including to address or fill data gaps and monitor both state and performance indicators.

A phased approach to enforcement of Allowable Activities was discussed during the development of the Plan. The General Management Considerations provide information for phasing and include, but are not limited to, the following:

- Seychelles marine charters phased in owing to the advanced reservation of guests one to three years in advance and the connection to activities in the tourism packages in the Outer Islands
- EU Seychelles Sustainable Fisheries Partnership Agreement with the industrial purse seine fishery plus individual agreements with vessel owners in the industrial long-line fishery
- equitable implementation of enforcement timelines for all sectors based on considerations of the benefits and impacts outlined during consultations for the SMSP process of proposing and gazetting of new MPAs, for example, for the sea cucumber fishing in Zone 1 areas in the Amirantes Group

A key consideration for the enforcement of the marine protection zones based on the Allowable Activities tables, especially in the Marine National Parks that are a fully protected category, is the length of the phasing-in schedule—the longer the phasing-in period, the more extraction is likely to occur.

For implementation, coordination with existing entities and projects is necessary and will include, but not be limited, to the development of co-management agreements. The governance mechanism for implementation includes considerations for improved coordination and communications. Governance frameworks and decision-making structures are important, including an Executive Committee.

Seychelles MSP Policy

The SMSP Policy contains an Action Plan with five Objectives and a total of 30 Activities leading to 35 Results (Table 15). The progress towards completing Activities has been good 25 February 2025, with only three activities (10%) not started. The total number of completed Activities is 13 of 30 (43%) and 14 of 30 (47%) are in progress. Some of the in-progress activities, for example, identifying data requirements for management objectives (4.10), were started and underway during the SMSP process but they continue to be ongoing and will need to continue through to implementation.

Table 15. Summary of the results and activities in the SMSP Policy Action Plan that have been completed, in progress and not started through Feb 2025.

Action Plan Objectives	SMSP Policy Results				SMSP Policy Activities				Grand Total
	Completed	In progress	Not started	Total Results	Completed	In progress	Not started	Total Activities	
1	10	0	0	10	8	0	0	8	18
2	1	4	0	5	0	3	1	4	9
3	1	5	0	6	2	4	0	6	12
4	1	2	6	9	2	4	2	8	17
5	3	2	0	5	0	4	0	4	9
Total	16	13	6	35	12	15	3	30	65

All activities from the SMSP Policy Action Plan were reviewed, discussed, and prioritised for implementation during stakeholder workshops in October 2023 and again in February 2025. A summary of the completed, in progress, and not started activities was made to assist with the implementation priorities (Table 16).

Most of the activities in the policy's Action Plan do not need an explanation for the next steps in implementation, however, we note that a management plan framework and management plan templates were both developed for Activity 2.6. We also note that a scientific committee will only be formed once a decision is taken on governance arrangement for Objective 4 and Activity 4.16. Additionally, a campaign was launched in 2024 to carry out public awareness and education strategy for public schools for activity 5.9. This campaign will be finalised in 2025.

Table 16. Status of all activities from the SMSP Policy Action Plan and the proposed timing to be completed during implementation. Activities completed during the SMSP process are noted and the timing greyed out. Short-term is 1–2 years after implementation begins and longer-term is 3–5 years.

Activities in Objectives	Description	Indicator for Results	Status	Year 1–2	Year 3–5
Objective 1: Marine Protected Areas, Zone 1 and Zone 2, are designated within the timelines specified for both phases of the MSP Initiative					
1.9	Identify at least 15% of the EEZ and/or Territorial Sea as areas for new biodiversity protection using the MSP Zoning Framework: Zone 1 and Zone 2.	Official map of approved areas	Completed		
1.10	Identify which legislation and category to be utilised for each zone area.	NPNCA NRCA	Completed		
1.11	Follow Protected Areas Policy for designation of Protected Areas.	Public Notices, Consultations	Completed		
1.12	Designate Phase 1 areas as protected.	Official Gazette	Completed		
1.13	Identify at least 15% of the EEZ and/or Territorial Sea as area for new biodiversity protection and zones for multiple use using the MSP Zoning Framework: Zone 1, 2 and 3.	Official map of approved areas	Completed		
1.14	Identify which legislation and category to be utilised for each Protected Area.	NPNCA NRCA	Completed		
1.15	Follow Protected Areas Policy for designation of Protected Areas.	Public Notices, Consultations	Completed		
1.16	Designate Zone 1 and Zone 2 areas as protected.	Official Gazette	Completed		
Objective 2: Zones are under effective management regimes that support the MSP objectives					
2.6	Develop, as a matter of urgency, standard formats for Protected/Management area management plans.	Management Plan Framework Management Plan template	Completed		

Activities in Objectives	Description	Indicator for Results	Status	Year 1–2	Year 3–5
2.7	Develop specific area draft management plans with clear measures to support area and MSP objectives.	Management Plans publicly available	In progress	1	
2.8	Draft plans reviewed by scientific and PA management peer group.	Scientific and stakeholder input	In progress	1	
2.9	Implement area management plans	Implementation Reports	Not started		1
Objective 3: Governance and sustainable financing frameworks are developed to enable effective implementation and management of the MSP					
3.7	Investigate and develop MSP governance options, in liaison with key agencies, through a process of stakeholder consultation for executive review.	Implementation governance mechanism proposal	Completed; being updated		
3.8	Develop selected option i.e. administrative structure, legislation/regulations and budget requirements and submit for approval.	Ministerial briefing, budget, Cabinet memo	Completed but being updated		
3.9	Develop Regulations and/or Act, as appropriate, in liaison with appropriate agencies by 2021.	Draft regulations and/or Act.	In progress	1	
3.10	Gazette/promulgate regulations and/or Act by 2021.	Gazette	In progress	1	
3.11	Assess available financing and include projected costing and funding gap in strategy to address the long-term financing of the MSP.	Sustainable financing framework in Plan document	In progress	1	1
3.12	Identify and employ MSP coordination agency staff and commence implementation of MSP by last quarter of 2021.	SMSP implementation mechanism operationalised.	In progress	1	
Objective 4: Monitoring, data collection and analysis is optimised, and management-oriented research undertaken to support attainment of MSP objectives and its adaptive management.					
4.9	Identify data requirements to support MSP and crosscutting Area management plan objectives. (X-ref Activity 4.8).	Monitoring protocols and resulting datasets	In progress		
4.10	Identify data requirements to support priority, area-specific management objectives. (X-ref Activity 4.8).	Monitoring protocols and resulting datasets	Not started		
4.11	Establish criteria for MSP datasets to facilitate analysis and utility (X-ref Activity 4.8).	Dataset guidelines and formats; data sharing agreements	In progress		

Activities in Objectives	Description	Indicator for Results	Status	Year 1–2	Year 3–5
4.12	Undertake independent peer review of all datasets (X-ref Activity 8).	Dataset reviews	Not started		1
4.13	Maintain data in formats suitable for transfer among tools and programs.	Dataset formats	Completed		
4.14	Identify strategic, crosscutting and key gaps in national knowledge and data for MSP management	Assessment of knowledge gaps and research recommendations	In progress		1
4.15	Develop a prioritised management-oriented research agenda.	Approved national research agenda	In progress		1
4.16	Establish an independent panel of scientific experts to develop and approve MSP scientific practices, review findings (X-ref Activities 1-4) and to approve model data sharing agreement	Independent panel established and operational.	Not started		1
Objective 5: Communities and stakeholders are actively engaged in the MSP Initiative					
5.6	Undertake periodic stakeholder analyses to ensure stakeholder outreach and engagement, in dynamic and evolving scenario, is optimised	Maintained stakeholder list	In progress		1
5.7	Provide regular stakeholder updates on development and implementation of the MSP with focus on upcoming opportunities for participation	Stakeholder updates and calendar events posted on website.	Completed (SMSP). In progress (implementation)	1	1
5.8	Develop and maintain a public education and awareness campaign on the need for, desired results from and progress in the Seychelles MSP. Highlighting how private individuals can contribute to the process.	Up-to-date SMSP website, email updates to stakeholder, meeting invites.	Completed (SMSP). In progress (implementation)	1	1
5.9	Develop and maintain a school age education and awareness campaign on the need for, desired results from and progress in the Seychelles MSP. Highlighting how private individuals can contribute to the process.	Education programme and activities. SMSP website updates. School-aged education and awareness during implementation	In progress		1
Total number of remaining SMSP Policy Action Plan Activities to complete during SMSP implementation				8	10

Implementation Governance Arrangements

As a matter of policy, government administration and oversight of the SMSP lies with MACCE. Implementation of the SMSP requires an empowered coordinating agency to enable effective monitoring and evaluation, adaptive management, and the realisation of the SMSP's strategic objectives. Effective coordination has been shown to significantly decrease the cost of implementation of marine protections and management. Consultations to develop options for the longer-term governance of the SMSP began in 2017. The initial institutional options under consideration as a "home" for the SMSP were the Seychelles Planning Authority, the Ministry responsible for Environment, the Department of Blue Economy, or a new independent Ocean Authority. In 2018, stakeholders reached a consensus that, due to the broad and cross-cutting nature of the SMSP, the governance agency should be an Authority, independent in its mandate and that administratively should not fall under a sectoral ministerial portfolio but rather under the President's or Vice-President's office to ensure cross-sectoral coordination and impartiality. This approach was subsequently endorsed by Cabinet in 2018. In September 2020, following intensive stakeholder review and revisions, a draft Bill to establish the Seychelles Ocean Authority (SOA) was finalised. The SOA would be a new body corporate charged with overseeing and guiding implementation, review, and adaptive management of marine spatial planning in Seychelles.

In October 2020, however, Seychelles' national elections resulted in a change in government and the global COVID-19 pandemic raised significant new fiscal concerns. Approvals for new authorities, including any potential SOA, were put on hold. Beginning in November 2020, ministerial-level discussions were held to develop other options for SMSP governance, and SMSP stakeholder consultations were undertaken in June 2021 to discuss these options for implementation in the near term. In August 2021, Cabinet was presented with options, and ultimately selected, an "interim" governance arrangement for implementing the SMSP process within the existing MACCE institutional structure for two years, utilising the Environment Protection Act 2016 (EPA) before establishing the Seychelles Ocean Authority (SOA). Accordingly, the draft SOA Bill was not advanced.

In 2022, a consultancy was undertaken to further develop this Cabinet-endorsed "interim" governance arrangement, including an operationalisation plan and annual budget. The "interim" governance arrangement (Seychelles Ocean Agency) was to be operationalised pursuant to formal regulations promulgated under the EPA. In the interim, an MSP unit was operationalised under the Principal Secretary of Environment's office of MACCE, with four staff recruited in 2023–2024. These staff are: a Principal Project Coordinator, a Compliance Officer, a Protected Area Specialist and Network Coordinator, and an Outreach Manager.

In May 2024, it became apparent that the interim agency would not be realised in a practical timeline. The MSP unit therefore proposed continuation of the process to develop the SOA. This was approved by the Ministry and procedures were re-initiated. This course of action is also in line with the expectations of TNC and the various donors for the Seychelles debt conversion. To facilitate MSP coordination and implementation, an informal management committee, equivalent to that outlined in the SOA bill, was established and met three times in 2024. The development and final form of the governance mechanism for MSP implementation has still to be approved by the government but the process to finalise is continuing. In the interim and in order to comply with the debt conversion loan agreement, the Seychelles MSP was signed into law on the 31st March 2025 through promulgation of the Nature Reserves and Conservancy (Seychelles Marine Spatial Plan) Regulations, 2025 (S.I. 18 of 2025).

REGULATIONS AND ENFORCEMENT

As per Code 1 in the Allowable Activities Tables and the General Management Considerations, all activities and uses will be conducted in accordance with applicable national laws, regulations, and policies, as well as applicable international laws, treaties, and agreements in force as of an agreed date. The mandates of all relevant authorities and applicable legislation and regulations support the implementation of the MSP and enforcement of uses and activities within the zones.

The Seychelles Marine Spatial Plan was signed into law by way of the Nature Reserves and Conservancy Act (Seychelles Marine Spatial Plan) regulations gazetted on 31st March 2025 (S.I. 18 of 2025). The marine protection areas were gazetted under the National Parks and Nature Conservancy Act (Cap 141), which was replaced by the Nature Reserves and Conservancy Act (2022). Site-specific regulations will come into force as

and when management plans are finalised and related regulations proposed by the management agencies for promulgation. Areas that do not have site-specific management plans and associated regulations will have general regulations for the zone criteria. The zones provide the minimum requirements, and additional criteria can be added through management plans and site-specific regulations. Site-specific regulations will be needed to address the conditions for the Allowable Activities in an area. Until the decision on regulations is finalised, the parameters for the zone criteria would be enforced. The Area-based Management Considerations should be consulted for site-specific activities.

A timeline for the enforcement of the marine protection areas will be defined in the SMSP Implementation Plan and implementation governance mechanism.

The SMSP policy was approved in September 2020 as an important legislative foundation for implementation of the Plan. Site-specific management plans will be required for each area for effective management (see Management Plans). Management plans have been drafted and/or endorsed for Zone 2 areas and drafting has started for two Zone 1 areas.

The first draft of the Establishment Bill was finalised in September 2020 and is aimed to provide the enabling legislative framework for an independent Ocean Authority. Regulations have been drafted for the four Outer Islands areas funded by the GoS-UNDP-GEF Outer Islands Project (Desroches, Poivre, Alphonse, and Farquhar).

At the time of completing the SMSP, the Seychelles Fisheries Act was amended and the Fisheries and Aquaculture Bill, 2025 (Bill No. 2 of 2025) was gazetted on 11 April 2025. The Bill includes a definition for Electronic Monitoring (EM) and once the new fisheries legislation is approved, EM would be required for all fleets in Seychelles. The Bill also includes direction for designation of zones or areas including consultation with the Ministries responsible for maritime zones or marine spatial plans. Finally, subsistence fishing is defined in the Fisheries and Aquaculture Bill as a fishing activity other than recreational or sport fishing, conducted exclusively for personal or family consumption. This has relevance to the management of subsistence fishing in all zones, and in particular Zone 1 areas.

As it relates to the MSP signed into law, the SMSP came into force on 31 March 2025 as per the related regulations.

Other legislation that is relevant for implementation of the MSP includes the Wild Animals and Birds Protection (Amendment) Act (2024) that was amended to consider international best practices and conservation interventions for species.

Management Plans

Management plans exist for most of the MPAs designated before the SMSP process: Aldabra World Heritage Site (2016; currently under revision), with a gazetted boundary extension to increase the area to 2,559 km²; Mahé plateau demersal trap and line fishery co-management plan (2015); D'Arros draft management plan (2014); Desroches, Alphonse, Poivre, and Farquhar protected area management plans (2018–2022; not endorsed). A number of Inner Island PA have terrestrial management plans such as the islands of Cousin, Curieuse and Ile Aride. The average cost to develop a terrestrial management plan is USD $12,000 in Seychelles (2025 estimate).

All of the Zone 2 Marine Sustainable Use Areas have either draft, final, or endorsed management plans (Table 17). The Zone 1 Marine National Park areas will need management plans developed during the SMSP implementation. At the time of SMSP completion, a consultancy was drafting the Aldabra Group Marine National Park and Terms of Reference were drafted for Bird Island, D'Arros to Poivre and Amirantes South. The D'Arros MP was started by Save Our Seas Foundation, as well as a conservation plan for St Joseph Atoll.

Table 17. Management plan status for Seychelles Marine National Parks and Sustainable Use Areas (May 2025) and known interest in co-management for 5 management units (MU); ToR is terms of reference; MP is management plan.

Management Plan	Area (km^2)	Known Interest in Co-management	Management Plan Status
Zone 1 Marine National Park			
Bird Island MP	106	Island owner	ToR drafted; Plan not started
D'Arros MP	25	SOSF-DRC	Plan drafted; consultation not started
D'Arros to Poivre MP	370	IDC; SOSF-DRC	ToR drafted; Plan not started
Amirantes South MP	1,335	IDC; Foundation; SOSF-DRC	ToR drafted; Plan not started
Aldabra Group MP	201,235		Consultancy started
Assomption MU	159	IDC;	see: Aldabra Group MNP
Zone 2: Marine Sustainable Use Areas			
Amirantes to Fortune Bank MP	217,589	Management committee proposed	Endorsed (2024)
African Banks to Rémire MU	1,325	IDC; Foundation	see: Amirantes to Fortune Bank
St Joseph MU	73.6	SOSF	Final draft
Coëtivy MU	2,950	IDC	see: Amirantes to Fortune Bank
Platte MU	2,377	IDC; Foundation	see: Amirantes to Fortune Bank
Denis Island MP	31	GIF; Island owner, Denis Island Pty Ltd	Final draft
Desroches Atoll MP	333	IDC; Foundation	Draft MP (2018-2022) (OIP)
Poivre Atoll MP	56	IDC	Draft MP (2018-2022) (OIP)
Alphonse Group MP	215	IDC; Foundation	Draft MP (2018-2022) (OIP)
Farquhar Archipelago MP	14,482	IDC; Foundation Management committee proposed	Endorsed (2024)
Farquhar Atoll MP	415	IDC; Foundation	Draft MP (2018-2022) (OIP) See also: Farquhar Archipelago MP
Cosmoledo and Astove MP	5,321	IDC; Foundation Management committee proposed	Endorsed (2024)

CO-MANAGEMENT

The implementation of the marine protection areas will include many considerations including co-management and co-management agreements. The development of these agreements includes considerations for transparency of the discussions and informing stakeholders. A co-management agreement template will be applicable for all protected areas in Seychelles and a legal manual for Authorised Officers will provide important guidance for legal aspects of enforcing protected areas.

Co-management agreements will be essential to clarify and document in writing the roles and responsibilities between government parties or between government and non-government parties. For example, co-managers may or may not want to have powers of arrest. This, and other responsibilities, will have to be discussed with MACCE and other relevant authorities in the development of the agreement.

Co-managers for the marine protection areas will be in addition to the existing mandates, not instead of. All relevant authorities such as the Ministry of Fisheries and Blue Economy (MFBE), SFA, and SMSA will be involved in the co-management and agreements discussions.

The costs of implementation will also need to be discussed in the development of co-management agreements. The scale of additional financial resources needed for implementation can be reduced by strengthening the coordination and effectiveness of the users operating within the identified MPAs, such as:

- international partnerships with research organisations/service providers
- co-management of MPAs
- encouraging management agencies to follow common frameworks and minimum standards

MANAGEMENT UNITS

In order to support management plans for Marine Protection Areas and co-management agreement proposals for implementation, co-management boundaries were discussed starting in November 2022 to provide clarity of the geographical extent of co-management responsibilities. These were named “management units” and were especially relevant for the Amirantes to Fortune Bank Sustainable Use area because it is more than 217,000 km^2 in size. A management unit (MU) boundary does not create a “zone within a zone” because the waters within the management unit are still the designation of the larger or full zone area.

The Allowable Activities Table applies to all activities within the management unit. The management unit has geographic coordinates to clearly delineate the spatial extent of the co-management responsibilities. Stakeholder workshops were held to review and discuss the proposed management units and all received high support to bring to the Executive Committee for approval. Management units were approved by the EC in February 2025. The discussion of co-management agreements for the management units would need to involve all relevant authorities including the SFA and Ministry of Fisheries and Blue Economy.

There are five approved management units (Table 18) with approved coordinates.

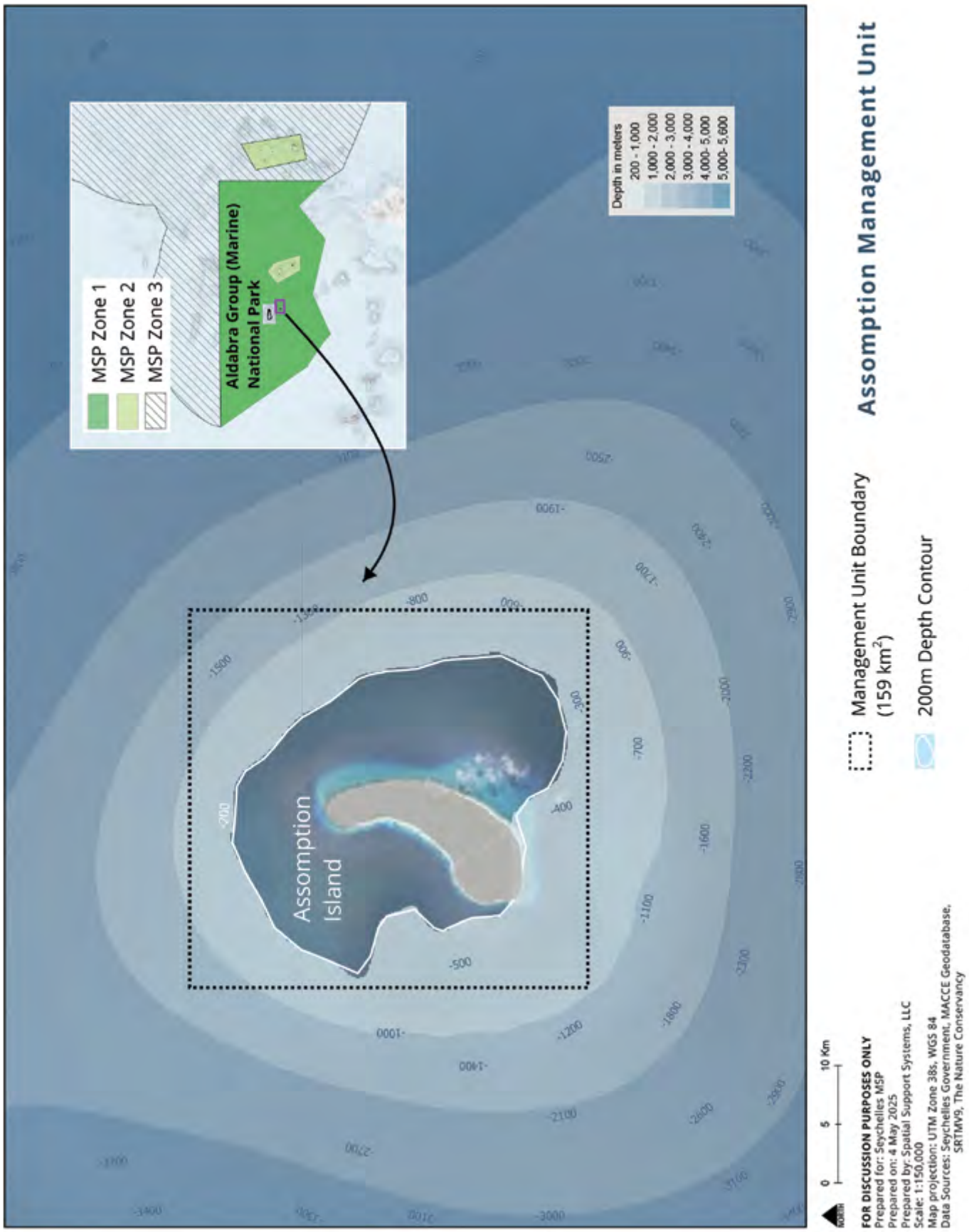
- The Assomption Management Unit is within the Aldabra Marine National Park. This MU indicates the extent of co-management proposed by the IDC. The management unit is 159 km^2 and its boundary fully contains two shelf high-relief habitat features.

The other four management units are within the Amirantes to Fortune Bank Sustainable Use Area (Figure 11).

- The African Banks to Rémire Management Unit contains a shelf high-relief bank feature (sand cay rim) and high-relief shelf. The coverage of this MU includes both African Banks and Rémire islands and is 1,325 km^2. This boundary indicates the extent of co-management proposed by IDC.
- The Coëtivy and Platte management units were both proposed by IDC and respectively are the same boundaries for the Around Coëtivy Island and Around Platte Island Fishing by Foreign Vessels Prohibited Areas in the Fisheries Act. The Coëtivy MU and Platte MU both contain high-relief bank platform reef and shelf high-relief habitat features, and are 2,950 and 2,377 km^2, respectively.
- The St Joseph MU contains two high-relief bank platform reef habitat features and the boundary indicates the extent of the co-management proposal from the Save Our Seas Foundation (SOSF). The management unit is about 74 km^2.

Table 18. Management units within Marine Protection Areas and co-management proposals, Seychelles.

Marine Protection Area	Management Units (MU)	Area (km^2)	Proposed Co-Management Entity for Management Unit
Aldabra Group Marine National Park		201,235	
	Assomption MU	159	IDC
Amirantes to Fortune Bank Marine Sustainable Use Area		217,589	
	African Banks to Rémire MU	1,325	IDC; Foundation
	St Joseph MU	73.6	SOSF
	Coëtivy MU	2,950	IDC
	Platte MU	2,377	IDC; Foundation



Map 22. Assomption Management Unit within the Aldabra Group Marine National Park, Seychelles.

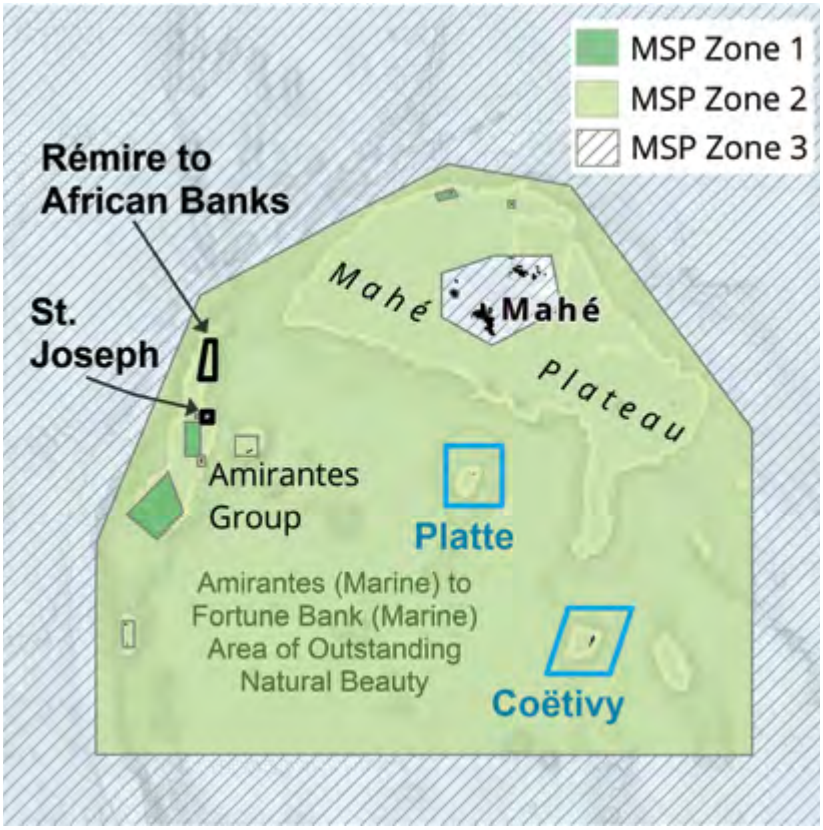
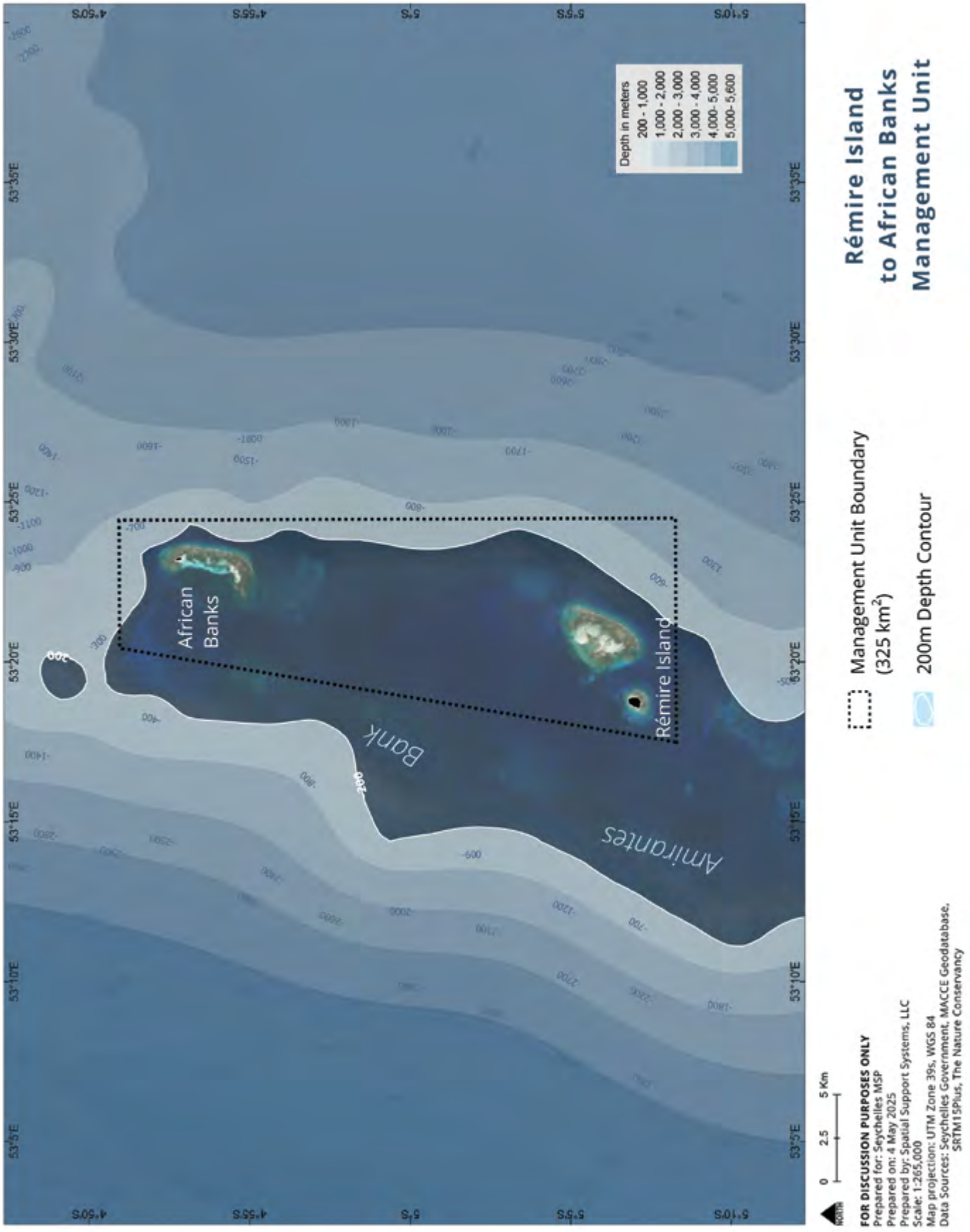
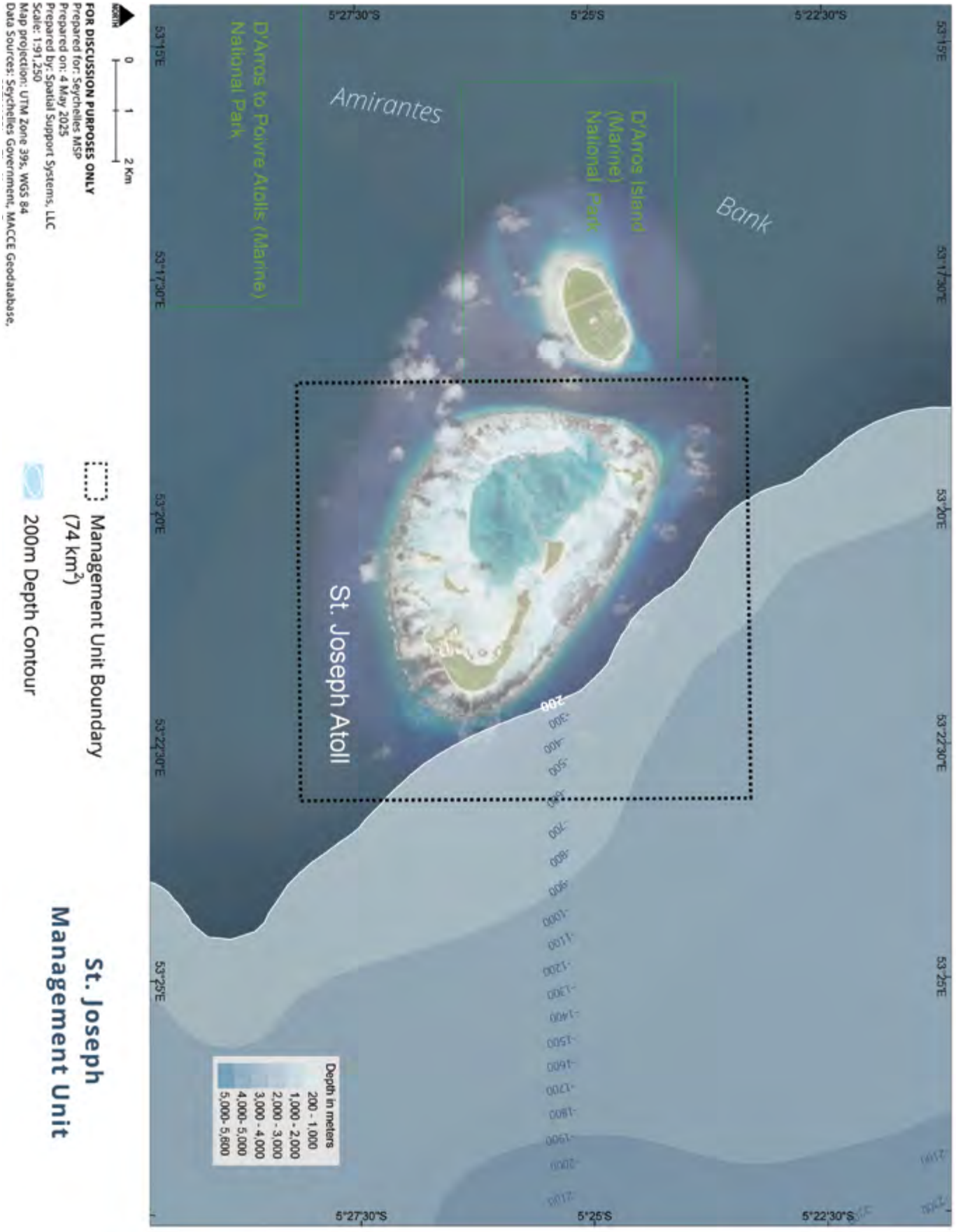


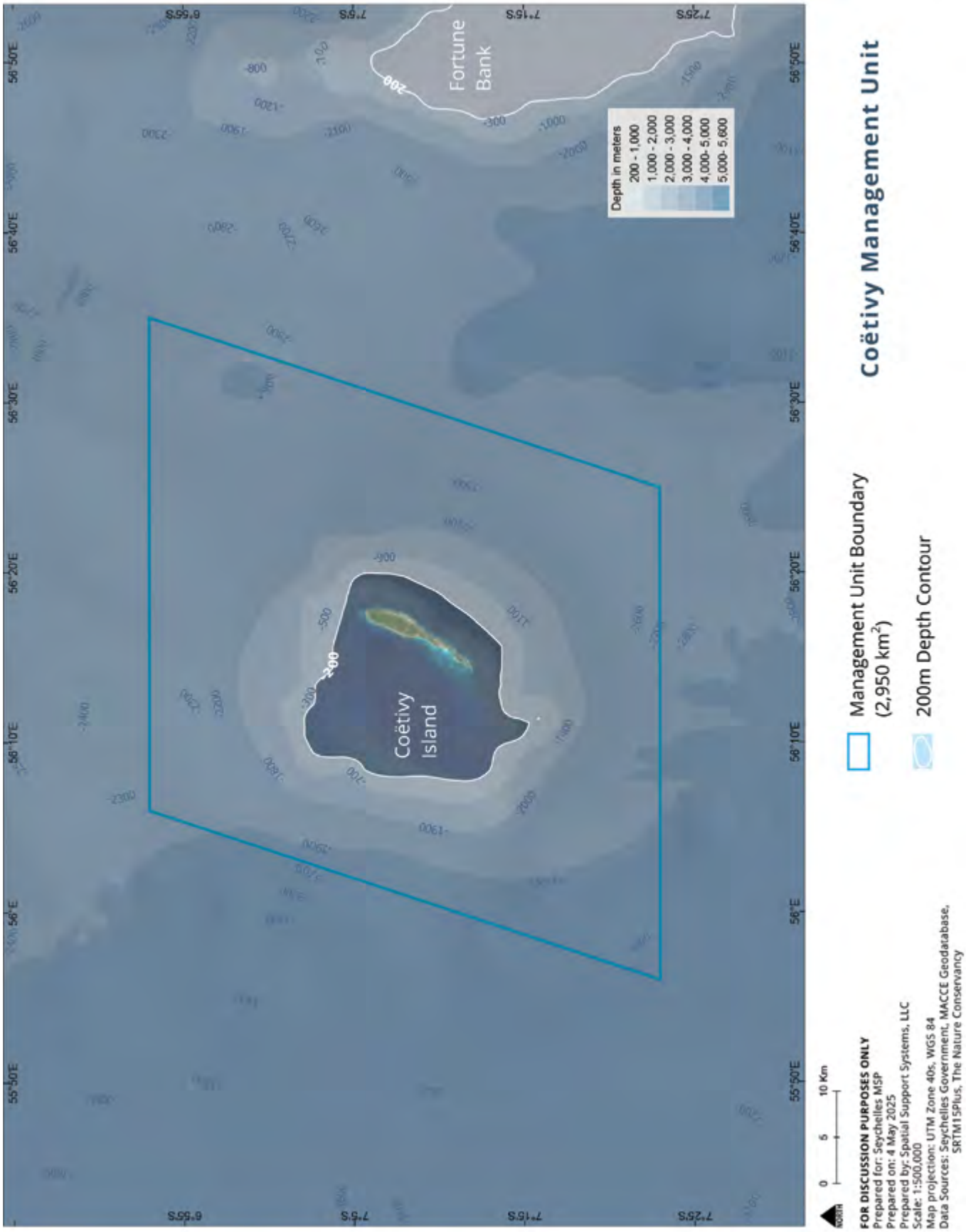
Figure 11. Locator map for four management units within the Amirantes to Fortune Bank Marine Sustainable Use Area, Seychelles.



Map 23. African Banks to Rémire Management Unit within the Amirantes to Fortune Bank Marine Sustainable Use Area, Seychelles.



Map 24. St Joseph Atoll Management Unit within the Amirantes to Fortune Bank Marine Sustainable Use Area, Seychelles.



Map 25. Coëtivy Management Unit within the Amirantes to Fortune Bank Marine Sustainable Use Area, Seychelles.

Map 26. Platte Management Unit within the Amirantes to Fortune Bank Marine Sustainable Use Area, Seychelles.

Costing and Financing

A desktop review for the management costs of 1,497 km^2 of existing and prospective MPA sites (based on analyses conducted in 2014, 2015, and 2017) before the SMSP started found that the average annual per km^2 expenditure was USD $3,271 (or USD $272 per month). However, to implement an optimal level of management would require more than USD $12 million (or USD $8,067 per km^2). The authors concluded that a single, large no-take reserve was less expensive to manage than a multiple-use MPA of the same size (including a 30% no-take area).

COSTING ANALYSIS 1.0

A costing and financing study for 400,000 km^2 in marine protection areas was completed in 2019. Some of the background research found that:

1. Establishing new MPAs is more expensive than managing existing ones.
2. Multiple-use zones are more expensive to manage than no-take zones.
3. Larger MPAs have a lower per unit cost than smaller ones.
4. MPAs with a lower level of stakeholder pressures have a lower per unit cost than MPAs with a larger number of different types of users.

Three management scenarios were developed through a consultative process for Large-Scale MPAs (LSMPAs) to estimate costs under different levels of management (Table 19). The scenarios accounted for the costs for planning and zoning, compliance and monitoring, surveillance and enforcement, and education and outreach, as well as biophysical, economic, and social research and monitoring.

The annual management cost for 400,000 km^2 of MPAs ranged from USD $30–42 million per annum. This equates to an average management cost of between USD $75–106 per km^2. These figures were comparable to other identified LSMPAs, accounting for inflation.

The study found that the annual cost of management equated to approximately between 1.8–3.6% of the total contribution of fisheries and tourism to gross domestic product (GDP). It was envisaged that with the implementation of the activities in the scenarios, GDP would increase further, reducing the proportional costs of management. In addition, accounting for the ecosystem services generated by the ocean, the cost of management at its most expensive option equated to 0.06% per annum.

Table 19. Three management scenarios for implementation, costs, and possible financing options for marine protection areas covering 30% of Seychelles EEZ.

Scenario	Management Scenario	Scenario Explanation	Scenario Objective
1	Basic management in both Zone 1 and 2	Coordinating existing efforts because minimal additional funding is available for active management activities. Builds on existing initiatives and processes and strengthens coordination.	Existing and planned site-level management plans are implemented. An overarching planning, research, and monitoring strategy is developed.
2	Optimal management in Zone 2 and Basic management in Zone 1	In addition to the above, increased financing ensures active management in areas with high user access. Management plans for all areas.	In addition to Scenario 1: co-management agreements are required, and Management Effectiveness Tracking Tools (METT) are institutionalised. Financing plans for all sites are developed and implemented.
3	Optimal management in both Zone 1 and 2	Significant financing is available for active management in all zones. All zones have approved management plans and monitoring data are collected and used to inform overall performance. No gaps in surveillance.	In addition to Scenario 2: data reporting and management systems are in place for all management authorities. Active and permanent on-the-sea enforcement and patrols.

Summary of findings for the costing analysis 1.0 in 2019:

- Literature on costing and financing large-scale marine protected areas is very limited.
- Insufficient investment in PA management is one of the predominant factors that lead to the existence of 'paper parks,' (i.e., those that only exist on paper) which have ineffective and insufficient management.
- A higher number of smaller MPAs, fragmented by either location or management arrangements, are generally less cost effective.
- MPAs are more expensive per unit to operate when they are smaller and/or closer to inhabited land.
- The cost of management is often very low in comparison to the value of the resources being protected.
- The main challenges facing implementing LSMPAs is monitoring, control and enforcement, financing, and ensuring national organisations work collaboratively.

COSTING ANALYSIS 2.0

A costing analysis 2.0 was completed in 2024 titled "Costing and Financing Options to Implement the Seychelles Marine Spatial Plan", and aimed to update the financial needs and potential funding mechanisms for the SMSP. The analysis estimated updated costs considering inflation rates since 2019. The 2024 estimates were that the SMSP requires USD $35–51 million annually, with an additional USD $10–42 million per year to support long-term operations.

Seychelles faces several challenges in securing adequate financing for its MPAs, including limited government budgets, fluctuating international aid, and reliance on tourism, which is vulnerable to global economic shifts. The report evaluated existing and potential financial mechanisms, such as tourism fees, sovereign debt mechanisms, and engaging new stakeholders like the shipping and petroleum industries. It also explored innovative solutions like blue carbon offsets and fisheries-based income. The importance of government leadership is emphasized, as LSMPAs typically require national-level governance and financial solutions. The report recommended integrating MPA finance within broader national development strategies and climate change adaptation goals. Strategic investments in coordination facilities, education and outreach, financial capacity, and new technologies were suggested to maximise the impact of available resources. The report also highlighted the need for a systems-led approach to align MPA finance with national economic goals. The report identified areas for further research and investigation, including detailed budgeting for the SMSP, policy options for financial governance, and evaluation of additional financial mechanisms. Overall, the report provided a detailed analysis of the financial requirements and potential solutions for implementing the SMSP, emphasizing the need for innovative financing mechanisms and strong government leadership to ensure the sustainability of Seychelles' marine protected areas.

Monitoring, Control, Surveillance (MCS)

The SMSP zoning designs were developed in full consultation with representative stakeholders and civil society organisations including the Seychelles Maritime Safety Authority (SMSA), Seychelles Fisheries Authority (SFA), Seychelles Coast Guard (SCG), Seychelles Port Authority, National Information Sharing Coordination Centre (NISCC), and Regional Coordination Operations Centre (RCOC). Implementation of the Plan has been a key consideration since the start of the initiative and a focus of many discussions. Several guiding principles for decisions, developed by the stakeholders in 2014–2015, reflect the importance of considering implementation in the design of the marine plan: feasibility, practicality, implementable, and affordable. Funding to support implementation of the SMSP will come in part from the Seychelles Conservation & Climate Adaptation Trust (SeyCCAT), created as a result of the debt conversion in 2016, the Government of Seychelles, and other partners. The SeyCCAT Act was passed in 2015 and revised in 2022.

The implementation of the Plan involves several components such as financing, capacity, governance, legality, monitoring, control, and surveillance (MCS), enforcement, and adaptation or revision over time. The entities responsible for MCS and enforcement provided significant input into the zoning design including the overall concept of the zones across the 1.35 million km^2 EEZ and the best zoning design(s) to support monitoring and ensure high levels of compliance, for example, straight lines and simply shaped polygons (e.g., squares,

rectangles). The components of the SMSP Action Plan from zoning to implementation include the Marine Spatial Plan document, Legislation, Operations, Management, and supporting documents. The Government of Seychelles, The Nature Conservancy, and SeyCCAT partnered to raise an additional $4.9M to finance the transition from zoning to implementation for the years 2022–2025. Through this additional and other ongoing support from partners such as the GoS-UNDP-GEF projects, SWIOFish3, and World Bank, numerous activities contributed to the SMSP to support effective implementation.

The Seychelles Marine Spatial Plan was designed with consideration of implementation from the outset of the planning process and the steps now, in transition from zoning to implementation, reflect the complexities of an integrated, multi-sector plan across Seychelles' EEZ. The Seychelles debt conversion was designed so that there will be a long-term financing mechanism in the form of an independent trust—Seychelles Conservation and Climate Adaptation Trust (SeyCCAT); the Trust provided important support for the zoning to implementation phase of the SMSP, as did several private grants.

A comprehensive policy and legislative review was completed in 2016 to review legal foundations for MCS. For the SMSP to be successful, the stakeholders held a constant message to the SMSP process team that the zones developed during the SMSP need regulations to enforce the Allowable Activities. The GoS-UNDP-GEF Outer Islands Project commenced drafting of the regulations for Zone 2 areas through an ongoing consultancy. Work also commenced to develop strategic management frameworks for the Zone 1 and 2 areas. The Seychelles MSP regulation was gazetted on 31st March 2025 and the drafting of regulations for the Zone 1 and Zone 2 management plans or categories will be finalised in implementation.

Key Components of Implementation

Resources and assets are essential for implementing a legally-enforceable marine spatial plan. The Seychelles Coast Guard has important enforcement assets and has to consider the reaction time of their enforcement vessels to incidences, especially in the Outer Islands. Responses would only be utilised when credible intelligence warrants an enforcement reaction. Furthermore, utilising vessels for additional activities, such as scientific monitoring in cooperation with other partners, already takes place with SFA and could be continued within the MSP scientific monitoring component.

A revised MCS plan for MPAs created under the SMSP was completed in 2023. The report, titled "Technical Assistance on Monitoring, Control and Surveillance for MPAs created by Seychelles Marine Spatial Plan", outlines the efforts and recommendations for enhancing the management and enforcement of MPAs in Seychelles including Maritime Domain Awareness (MDA). The project, initiated in January 2023, was led by NLA International LTD consultants in collaboration with MACCE under the SWIOFish3 project. Key objectives included assessing risks of non-compliance, evaluating existing MCS capabilities, defining solutions to address capability gaps, and strengthening MCS through equipment and training. The report highlights the need for enhanced MCS capabilities, leveraging satellite surveillance, sensors, and artificial intelligence (AI) to monitor human activities in MPAs.

Recommendations include:

- considering MCS/MDA solutions against wider national requirements
- using the Strategic Risk Assessment as baseline data and sharing it with relevant government departments
- procuring a service that integrates satellite, sensor, and AI data for comprehensive maritime activity analysis
- updating software and hardware at NISCC for data fusion and analysis
- developing a Concept of Operations (CONOPS) for effective MCS/MDA implementation

The report emphasizes the importance of a comprehensive understanding of human activities in MPAs and suggests that satellite surveillance, combined with other data sources, will provide cost-effective and efficient monitoring solutions.

Other key points or considerations as they relate to implementation of the SMSP zones:

- Aerial surveillance is conducted by the Seychelles Air Wing, whose main task is to patrol the EEZ. Dornier 228 planes are used for patrol and recognisance missions. The planes have an endurance of eight hours, can cover 2,400 km (1,300 nautical miles) per flight, and are equipped with infra-red sensors, radar, and cameras.
- Radar stations are managed by the Seychelles Coast Guard and there are currently stations on Mahé, Alphonse, Farquhar, Assomption, Astove and Cosmoledo islands. These radar stations have a range of 25–30 nautical miles, with the AIS range from the tower up to 80 nautical miles. These stations combine satellite, VMS, and AIS information, which are transmitted in real time. In 2025, radar stations were being upgraded and new ones established on Praslin and La Digue. It has been suggested that an additional eight radar stations are needed to completely cover the EEZ.
- Drones could complement the activities of the Air Force or provide surveillance for nearshore MPA areas, as well as provide additional management activities, such as habitat mapping. A pilot drone test was conducted by FishGuard and SFA with the aim to support fisheries surveillance efforts through the use of long-range drones. Testing would determine the final costing and viability of the project. It was estimated that each drone could cover 10,000 km² in one flight or make a round-trip to a point located approximately 350 km offshore. The drones could fly fully autonomous missions - a pilot on the ground was not required. The testing indicated that four drones could operate from separate bases evenly spread throughout the EEZ.
- A number of institutions are involved in maritime surveillance in Seychelles. The Regional Coordination Operation Centre (RCOC), established by the Community of the Eastern Southern Africa and Indian Ocean, hosts a regional centre for operational coordination. This work uses AIS to track the VMS signals of vessels, determining whether vessels are fishing (based on their speed and change of direction), trans-shipping, or commuting through a zone.
- The National Information Sharing and Coordination Centre (NISCC) was formed out of the need to coordinate national efforts to react to maritime crime, piracy, search and rescue, and IUU activities. NISCC aims to be established within a five-year period, involving seconded staff from partner organisations to act as focal points depending on the reported activity.
- At present, all vessels conducting fishing activities require a fishing licence under the Fisheries Act. In October 2014, SFA legally took responsibility from the Seychelles Licencing Authority for the processing and issuance of fishing licences.
- Vessel Monitoring Systems (VMS) are a requirement for all vessels in Seychelles. It is predicted that it is relatively easy to add MPA coordinates to VMS systems (as well as electronic navigation charts through the UK Hydrographic Organisation (UKHO) that would alert vessels as they enter and exit MPAs. Through consultations, it has been highlighted that compulsory VMS for all vessels is the most cost-effective way in the long-term to know who is entering and exiting an MPA.
- Subsistence fishing is defined in the Fisheries and Aquaculture Bill (2025) and this definition is used for the SMSP as per the SC recommendations and EC decision. Additional information to inform subsistence fishing activities, especially in Zone 1, can be found in the General Management Considerations and Allowable Activities Tables. The EC discussions on subsistence fishing included assessing sustainability for catches, monitoring and enforcement, developing quotas (especially for reef fish), and a proposed framework for subsistence and recreational fishing developed by SFA. A framework could regulate subsistence fishing, however, a permit would not be required under the current Act. For monitoring and managing of subsistence fishing, a joint approach was proposed including the Coast Guard, SFA, marine police, and the co-manager, where applicable. A recommendation from the SC was to establish baseline surveys before subsistence fishing guidelines and quotas are developed.
- For fisheries, a clear and consistent catch monitoring system is essential in order to understand the impact of fishing efforts in the designated Zone 2 Sustainable Use Areas in order to inform long-term decision-making and impact of allowable activities. Comprehensive logbook reporting or statistically robust sampling of landing sites (land-based surveillance) would allow for options for achieving total catch estimates and stock assessments. This could also support actions to enforce regulations on size limits, allowable species, and seasonal restrictions at landing sites, markets, and retailers. This activity area should also be supported by strong communication information so fishers and customers are aware of regulations.

- SFA's Monitoring, Control, and Surveillance (MCS) Section is comprised of the Monitoring and Control Unit and the Enforcement Unit.
- The Indian Ocean Tuna Commission implements a regional observer scheme, which is important for providing an independent source of information on fishing activities. This can help inform analysis on catch rates and bycatch mitigation measures.
- Another area for fisheries monitoring is the ports of entry. Seychelles is a signatory to the Port State Measures Agreement (PSMA) as well as Mauritius, Madagascar, Sri Lanka, South Africa, Mozambique, and European Union. In the region, the combined signatories could provide for enhanced efforts to tackle illegal, unreported, and unregulated (IUU) fishing. The PSMA is the first binding international agreement that specifically targets IUU fishing. It lays down a minimum set of standard measures for Parties to apply when foreign vessels seek entry into their ports or while they are in their ports. The Agreement aims to ensure that IUU fishing activities that take place in Seychelles but leave the EEZ can be reported at the port and prevented from selling illegally caught stock and face arrest. An effectively implemented PSMA should result in an increased deterrence to illegal fish in the designated zones.
- In 2024, gaps were identified and recommended measures for inclusion into the Seychelles National Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported, and Unregulated Fishing were submitted.

MANAGEMENT PLAN TEMPLATES

The process of integrating the new marine protection areas, some of which are very large (more than 200,000 km^2), into the existing structure for managing marine protected areas in Seychelles has resulted in a decision by the government to develop a template for management plans for use with all protected areas in Seychelles. Under the NRC Act, there is a requirement for standardisation of management plans. Two templates for MPA management plans were developed between 2023-2024, with one best suited for small areas and the other for larger areas: "Seychelles Protected Areas Management Plan Template" (2024) and "Development of Management Plans for Sustainable Use Areas (MSP Zone 2")(2023), respectively. These templates include sections on the national context, site governance, protected area description, current use, management context, management strategies, performance measuring framework, and review process. The templates provide detailed explanatory notes for each section, including mandatory and discretionary elements, and emphasize the importance of stakeholder consultation, legal frameworks, and sustainable management practices. The templates include a list of acronyms and symbols plus additional notes on management and operational strategies. The templates aim to guide managers in creating effective, best practice management plans that can support management effectiveness (e.g., Protected Area Management Effectiveness - PAME).


LINE RED SNAPPER
SEYCHELLES
HOOK AND LINE FISHERMEN

CHAPTER 5: Monitoring and Evaluation of the SMSP

Marine spatial plans are intended to be living documents that are reviewed and adapted over time (UNESCO, 2015). Monitoring and evaluating is key for the review process to best understand what is working well and what needs to be changed or improved over time. Understanding the effectiveness of an MSP to meet its stated goals and objectives is central to the underlying principles of marine spatial planning being feasible, practical, and implementable.

During the decade that the Seychelles MSP process progressed, monitoring and evaluation evolved globally and expanded to monitoring, evaluation, and learning (or MEL) to explicitly emphasise the importance of incorporating lessons learned in monitoring programs.

The IOC-UNESCO Guide to Evaluating Marine Spatial Plans (2015) suggests eight steps that can be taken to assess whether Plans are successful. The purpose of monitoring, evaluation, and learning (MEL) for a marine spatial plan is to know what it is (or is not) achieving so that it can be improved during revisions and updates. Without MEL, improvement would be difficult to make.

Monitoring encompasses different types and purposes and so it will need to be clear in the SMSP implementation plan what type of monitoring is referenced. For example, there is environmental, compliance, and performance monitoring. There are other types of monitoring such as financial monitoring, social safeguards monitoring, and stakeholder monitoring. Environmental monitoring focuses on assessing changes in ecosystems and tends to focus on state-of-the-environment measurements like ecosystem health, species diversity, or abundance. Compliance monitoring focuses on whether human activities are in compliance with legislation, regulations, licenses, and permits. Lastly, performance monitoring focuses on measuring program or management successes, and whether processes are (or are not) working. Performance MEL typically focuses on previously established goals and objectives. In the case of the SMSP, implementation and MEL would focus on the three goals of the SMSP process and if they are (or were) successfully implemented (30% biodiversity protection, climate change adaptation, and blue economy).

Stakeholder discussions during the SMSP process identified areas of interest for reviewing and adapting the plan over time and raised questions related to environmental, compliance, and performance monitoring. There was also a lot of interest to better understand financial sustainability of implementing the SMSP and stakeholder engagement in the implementation. As a result, multiple categories of monitoring would need to be incorporated into MEL for the SMSP implementation plan: environmental, compliance, performance, financial, stakeholder engagement, and social safeguards. Examples of the questions or issues raised during stakeholder discussions include but were not limited to:

- Will coral reefs be healthier in marine protection areas than in other zones?
- Are the marine protections zones enforced?
- Would the boundary or category designation of a marine protection area change during implementation when additional data and information are gathered on ecosystems, uses, and activities?
- How are the marine protection areas benefitting or impacting sustainable economic activities?
- What changes are happening due to climate change, such as sea surface temperature increases, and would this affect the boundary of the marine protection areas?
- Are users complying with the Allowable Activities Tables?
- Is the Blue Economy advancing in Seychelles?
- How will stakeholders be engaged in decisions during implementation?

8 Steps for Evaluating the Performance of Marine Spatial Plans

The eight steps suggested by the IOC-UNESCO Guidebook (2015) for monitoring and evaluating the performance of marine spatial plans are listed below. The guidebook provides more details for each step, the outputs of each step, and suggested tasks. The results of the performance monitoring and evaluation process would be used to adapt the next cycle of marine spatial planning.

Step 1: Identifying the need for performance monitoring and evaluation. Who is the monitoring for and who will benefit from the evaluation? How much information is needed and what is the capacity to undertake the evaluation?

Step 2: Identifying measurable objectives of the marine spatial management plan.

Step 3: Identifying marine spatial management actions.

Step 4: Identifying indicators and targets of performance for marine spatial management actions.

Step 5: Establishing a baseline for selected indicators.

Step 6: Monitoring indicators of management performance.

Step 7: Evaluating the results of performance monitoring.

Step 8: Communicating the results of performance evaluation.

Revisions and Adaptation of the Plan

As a living document, the MSP will be revised and adapted in accordance with global best practices and lessons learned from other geographies. For some of the MSP completed and approved around the world, such as the Norway and Belgium MSPs, review cycles are 5-year intervals but the time length varies. It is important that a revision and adaptation cycle is developed that is practical and feasible for Seychelles' implementation capacity.

The cycle for the Seychelles Plan revisions is proposed at each 10 years, or at such period as the implementing authority may allow but not more than 10 years should pass before review and revisions. The review process could start at year seven and last 12–24 months beginning with review of the indicators that have been monitored, gather and analyse data for the review, hold stakeholder consultations and public review, and finally develop recommendations for Plan revisions. The revision of the Plan document could take up to 12–18 months depending on the extent of changes recommended and supporting documents or analyses needed. The goal for the revision cycle is an updated Plan ready for government approval in year 10.

As per the Physical Planning Act, the SMSP might want to adopt a similar process for review and revision:

"The Ministry shall, once in every ten years after the date on which the Seychelles Marine Spatial Plan is signed in to law and thereafter once in every ten years, or at such period as the Ministry may, by notice in the Gazette allow, but not more than each ten years, review the Seychelles Marine Spatial Plan in accordance with the provisions of the NRC Act.

> *(a) The manner of preparation of the review of the plan, its approval, and publication shall be such as may be prescribed in the plan.*
>
> *(b) the Ministry shall give notice in the Gazette and in at least one daily newspaper that the Seychelles Marine Spatial Plan is under review".*

An MEL framework, with associated protocols and indicators, will need to be developed during implementation. The MEL framework and workplan would identify the metrics and MEL focus for effective implementation of the plan, reporting on the selected metrics or indicators, and assessing the impacts of the Plan in relation to the three SMSP objectives.

Key questions that could drive the revision and adaption of the Plan include:

- What is the process to update the Plan?
- What is the process to make decisions on new uses and activities within the MSP zones?
- What aspects of the Plan will be revised and adapted?
- What are the monitoring protocols to track the Plan between revisions?
- What are the indicators to monitor the Plan?
- What are the new uses and activities that need to be integrated into the Allowable Activities Tables and documents?
- What are the monitoring protocols and indicators for assessing and reviewing the locations of the marine protection areas?
- What is the process to review the marine protection areas and their locations or boundaries during the Plan review?

This Plan is a living document and maintaining data layers will be an essential activity for the management of the zones between revisions; this activity is identified in the SMSP Policy action plan's Objective 4 (see: SMSP Policy). Data sets that were used to develop the plan could require updating for the plan revision and also new data layers located or created. Maintaining relationships with key data providers and updating data layers, the spatial data catalogue, and Data Sharing Agreements will support the process for plan revision. Best practices from IOC-UNESCO and MSPglobal indicate that evaluation of MSP is ongoing and the importance of a MEL framework is essential to evaluate the success of the Plan's objectives.

The use of Marxan and other planning tools during implementation and Plan revisions will need to be evaluated, which would be part of the implementation plan activities and the management-oriented research agenda (SMSP Policy activity 4.15). Marxan and/or other prioritisation software could be run to evaluate updates to biodiversity and zoning priorities and evaluate the zoning design in relation to capturing any changes to key biodiversity features and the benefits or impacts to socio-economic objectives.

Of key importance during implementation are decisions related to new uses and activities that are not on the Allowable Activities Tables, or changes to uses and activities on the tables. During the SMSP process, a draft matrix for decision-making was developed that could be used to inform these decisions. The matrix includes types of activities, levels of stakeholder engagement, and key habitat types.

Monitoring and Research Priorities

The implementing authority of the SMSP Initiative will identify ecological, economic, and socio-cultural indicators to monitor and evaluate to see what changes after the Plan is implemented. The development of indicators is underway including discussions with international experts for appropriate indicators for deep-water marine protections. The management plans for the Amirantes to Fortune Bank, Cosmoledo and Astove, and Farquhar Archipelago Sustainable Use Areas each contain an indicator matrix that was endorsed by government. The indicator matrices will need to be integrated into the SMSP monitoring and research priorities.

Research for Plan implementation would be oriented towards management and measuring management effectiveness and not purely academic, meaning that the focus for any research would be generally towards applied research rather than basic research. Basic research should not be ruled out as it relates to the SMSP zones because there is much still not known, and to learn, about the marine waters and ecosystems in Seychelles.

Implementation efforts can look to the Seychelles Ocean Research Agenda (SORA) for the development of monitoring and research priorities. The SORA is a comprehensive strategy aimed at promoting sustainable ocean science in Seychelles. It was developed by Bee Ecological Consulting and supported by several organisations or funders including SeyCCAT, Blue Economy Research Institute (BERI), and the Blue Nature Alliance. The validation workshop was held 27th September 2024 for "A Management-Oriented Research Agenda for Sustainable Development of Ocean Science in Seychelles". The final report has the following key components:

Introduction and Context: SORA addresses the need for coordinated marine research to support Seychelles' sustainable blue economy, covering the EEZ, Extended Continental Shelf (ECS), and JMA. It aligns with international commitments like UNCLOS, CBD, and the Paris Agreement.

Priority Research Areas: Six thematic areas:

- Ocean Observation
- Marine Biodiversity Conservation and Sustainable Ecosystem Management
- Sustainable Fisheries and Aquaculture
- Ocean Economic, Technology, and Energy
- Marine Pollution and Human Health
- Climate Change Adaptation and Mitigation

Enabling Environment: Strategies to facilitate effective research include:

- establishing a national coordination mechanism for research permits and data management
- promoting co-design and collaboration among stakeholders
- engaging the private sector in ocean science
- developing a national data center and sharing data according to international standards

Action Plan: A detailed action plan outlines steps to create a conducive environment for implementing the SORA, including acquiring government approval, setting up a national research council, developing standardized protocols, and establishing a competitive research fund.

Conclusion: The SORA document emphasizes the importance of national coordination, resource mobilization, capacity building, collaboration, private sector engagement, and data management to support sustainable ocean science and enhance marine biodiversity conservation in Seychelles.

In support of SMSP implementation, work is ongoing to develop standardized approaches and protocols for environmental monitoring, reporting, management, and other pertinent management and administrative processes.

In 2024, MACCE Department of Environment, in partnership with the Blue Economy Research Institute (BERI) and in consultation with other key technical stakeholders, such as Seychelles Bureau of Standards (SBS) and National Institute of Science, Technology and Innovation (NISTI), also developed and refined an Inner Island (Zone 3) Ambient Environmental Quality (AEQ) monitoring protocol. The SORA is planned to be presented to Cabinet for endorsement and a decision on where it will be housed.

CHAPTER 6: Lessons Learned and Challenges

Lessons Learned

The SMSP gathered lessons throughout the process and shared them widely with the stakeholders, other MSP processes around the world, and other planners and scientists. Lessons were learned throughout the SMSP but in particular during the completion of Milestone 1. This is because the Seychelles MSP process had the slightly unusual structure of legally binding milestones at intervals throughout the planning process.

GENERAL LESSONS

- Gather lessons learned from other geographies. Learn what did and did not work in other planning processes. Ask for examples of documents and templates so as to not begin from scratch. Customise and build on previous work.
- Marine spatial plans take time; need patience and persistence. Time is needed to gather information and discuss with all involved any implications that MSP may have on livelihoods and government agencies. Give stakeholders time to gather information and prepare comments and inputs.
- Implementation of the MSP may hold future challenges; prepare for possible scenarios and build flexible options that can be adapted.
- The political support and commitment to the process from the beginning, with leaders, including the President, understanding the purpose and objectives of the initiative, was a major factor in success. Project staff reported back regularly to Cabinet and sought feedback from the decision-makers, developing the political will that was needed to follow the six-year process.
- Establishment of the right partnership at the beginning was essential: as a Small Island Developing State, Seychelles lacked prior MSP experience, technical capacity, and knowledge for the MSP process. TNC provided MSP expertise, a process and science lead, and a project manager. The project manager is based in Seychelles and able to talk regularly to the Ministry. The SMSP process and science lead was based in Canada and travelled frequently to Seychelles.
- Given that sectors often differ in their level of understanding of the issues and have different capacities for participation, project staff ensured that committee meetings and reporting arrangements suited all involved. Technical Working Groups were established for specific sectors and topics (e.g. fisheries, tourism, finance, climate change) allowing space for technical discussions and developing draft products.
- The issues of new protected areas and future exclusion of industrial tuna fishing, oil and gas exploration, and marine charters for sport fishing were difficult and impartial facilitation (independent from the Ministry) ensured that all sectors were able to discuss the proposed locations and potential impacts. An economic assessment for industrial tuna fishing was very useful. During the zoning process, all sectors agreed to forego some areas that they had mapped as high value; ultimately a compromise was reached between economic development and protection of key areas for biodiversity and ecosystem function.
- It is essential to understand that the adage “one size fits all” does not apply to MSP. Nevertheless, in the same way that lessons learned about marine spatial planning from other geographies were used to develop the Seychelles process, lessons from the SMSP will apply elsewhere.
- The Territorial Sea boundary (12 nm) was not officially gazetted in Seychelles at the time the SMSP process launched. The SMSP provided an important opportunity to support the Department of the Blue Economy to update the data for the base points, undertake official international review and analysis to finalise the Territorial Sea boundary coordinates and extent, and publish the Territorial Sea in the official Seychelles Gazette.

- To avoid confusion regarding the boundary and delineation of marine protection areas, it is important to develop protection zones that encompass the feature(s) that is/are the focus of protection with no buffer zones, ensure there are no zones within zones, use straight lines, and consult enforcement agencies. Buffer zones can result in confusion as to what is or is not the MPA, zones within zones can lead to a complicated MPA network and challenges for implementation, and straight lines between two points are ideal for monitoring and enforcement of determining whether a prohibited activity is inside or outside the boundary.
- The SMSP was guided by a stakeholder recommendation to not designate too many new marine protection areas because of enforcement and management effectiveness concerns given the large size of the EEZ and capacity for implementation.

PROCESS DESIGN

- Excellent notes are needed from workshops and minutes because key issues may arise multiple times. A searchable advice log was key for assembling topics or content in order to provide summaries of stakeholder input.
- Milestones created clear steps along the way and suitable spacing allowed for development of supporting science, documents, analyses, and assessments.
- The three milestones were legally binding commitments and they created the urgency to complete spatial planning steps by specific due dates.
- Multiple forms of communication are needed for marine spatial planning owing to the wide range of sectors, uses, and activities that are included. Communications are complicated further when multiple languages are involved. It was essential to have someone on the core team who spoke the local Creole language.

STAKEHOLDER ENGAGEMENT

- Ensure that all sectors participate fully; address equity issues related to engagement, representation, and contribution. Engage stakeholders in diverse ways.
- Time is needed for stakeholders to gather the information to present their arguments and for discussions about new proposals to take place as these arose. It was accepted that the process would slow down if there was lack of agreement or misunderstandings, and facilitation focused on gathering information to help resolve issues and obtain a high level of support.
- Trust-building was essential. Given the lead role of the Ministry of Environment, Energy and Climate Change, there were concerns from some stakeholders that biodiversity protection would dominate discussions. It was continually emphasised that the SMSP was multi-objective, and that it was a government priority to ensure both biodiversity conservation and sustainable livelihoods.
- Spatial data are essential for an MSP. To ensure that sectors were equally well informed and proposals were evidence-based, relevant scientific data and local knowledge were made available from the start. Each sector provided spatial information indicating their priority areas, and also reviewed data from consultations to ground-truth them for accuracy. The GIS (Geographic Information System) methodology must also be able to receive confidential or proprietary data and use it to develop proposals without revealing specific locations.
- A consistent effort was made to ensure that key stakeholders were present during relevant discussions so that many views could be presented and decisions were transparent. Meeting materials were distributed and comments received to ensure that all views were incorporated. Public information sessions were held on all the main islands to also reach civil society and stakeholders. Finalised meeting minutes and other documents were made available through the website.

SPATIAL DATA INFRASTRUCTURE

- Data layers may not always be available for local uses and activities. Use participatory mapping to create new spatial data with local knowledge and local experts for marine uses and activities, especially for marine uses that may lack any reporting requirements, licenese, permits, or agreements. Build mechanisms in to participatory mapping to address any confidentiality concerns. Participatory mapping can be undertaken using a range of methods from paper charts or maps, software for sketching (Adobe GeoPDF) to digital platforms and online support tools (e.g., SeaSketch).
- For deep waters or coarse-scale habitat features, modelled data from reliable publications can be used to inform zoning designs, such Geomorphology of The Oceans" published by Harris et al. (2014) in the journal *Marine Geology*.

ZONING TO IMPLEMENTATION PHASE

- This phase took place from March 2020 to 2025. The Zoning to Implementation phase was so-named to capture the specific phase of activities to sign the MSP into law after the 30% zoning design was completed and all zones identified for the full 1.35 million km^2 in support of the three SMSP objectives.
- Identify the Implementation Team and integrate with the SMSP Core Team early. Develop the governance and project management structure to allow for a smooth transition in tasks and activities from the Core Team to the Implementation Team.
- Identify clear roles and responsibilities during the Zoning to Implementation phase for efficient and successful project management.

Challenges

DEVELOPING AN MSP

- Reaching agreement and high levels of buy-in takes time. It was a challenge to schedule meetings often enough to review outputs and meet deadlines and yet not overly burden stakeholders with frequent meetings and workshops. Stakeholders need time to respond to the requests for information as well.
- Be prepared for changes within government. Develop briefing packets and schedule briefing sessions with new staff and Ministers. The SMSP process took place over three national elections and multiple Ministers, CEOs, Principal Secretaries, Director Generals, Directors, and essential technical staff.
- Provide equitable opportunities so that all stakeholders can participate fully in the committee meetings and workshops. The SMSP developed an honorarium policy for the Steering Committee and Technical Working Groups.
- Multiple approaches were necessary in the stakeholder engagement processes to account for different levels of availability during regular working or office hours. The engagement strategy needed to include options to meet with marine stakeholers that were at sea during workshops, such as the fisheries and transportation sectors.
- Illegal activities such as drug smuggling, human trafficking, and trade in endangered species (CITES) were out of scope for the SMSP. However, it was important to work with maritime law enforcement personnel to understand the limits of the SMSP process, synergies that the SMSP zoning might provide to enforcement authorities for their priority areas, and what would not be included in management plans for the marine protection areas.

COVID-19 PANDEMIC

- During the COVID-19 pandemic 2020–2022, the SMSP adjusted to online communications and once approved for in-person meetings, to follow the health department guidelines for distancing during in-person engagements. The SMSP process developed stakeholder engagement protocol for virtual consultations and adapted other protocols so as to be able to support stakeholders as previous to the COVID-19 pandemic, for example the SMSP stakeholder honorarium.
- The SMSP core took some time to initiate virtual meetings and considered multiple factors before switching to online consultations. It was not a reasonable assumption that all stakeholders could switch immediately from in-person meetings to virtual meetings. First, the pandemic created an enormous number of new tasks that took additional time for everyone and especially those living on small islands with limited options for purchasing essential goods and services. In 2020–2022, online meetings were difficult to attend amidst daily life during the pandemic, including dealing with active COVID cases Second, an online option assumed that all participants or attendees would have access to a device for the virtual meeting (e.g., phone, tablet, laptop, or desktop computer) and internet connectivity, and many did not. Internet connectivity and speed in Seychelles has improved greatly since the SMSP started in 2014, especially with the PEACE fibre optic service. The options available on Mahé, Praslin, and La Digue were very different a decade ago.
- Software to use Zoom or other platforms may not work well in all locations due to the need for faster internet speeds and computing power than what were available; some stakeholders may need newer laptops and operating systems to run software for virtual meetings.
- Restarting in-person meetings began in April 2022 for those stakeholders in the country. In-person meetings posed risks of COVID exposure and additional measures were needed to comply with the Seychelles health and safety guidance and protocols for the pandemic.

ABBREVIATIONS

- AAT – Allowable Activities Table
- AEQ – Ambient Air Quality
- AIS – Automatic Identification System
- AONB – Area of Outstanding Natural Beauty
- BERI – Blue Economy Research Institute
- BIOFIN – Biodiversity Finance Initiative
- CBD – Convention on Biological Diversity
- CITES – Convention on International Trade on Endangered Species
- DST – Decision Support Toolkit
- EBM – Ecosystem-based Management
- EEZ – Exclusive Economic Zone
- EIA – Environmental Impact Assessment
- ESIA – Environmental and Social Impact Assessment
- FAD – Fish aggregating device
- GBF – Global Biodiversity Framework
- GEF – Global Environmental Facility
- GIF – Green Islands Foundation
- GIS – Geographic Information System
- GoS – Government of Seychelles
- HWM – high-water mark
- IBA – Important Bird and Biodiversity Area
- ICS – Island Conservation Society
- IDC – Island Development Corporation
- IHO – International Hydrographic Organisation
- IMO – International Maritime Organisation
- IOC – Intergovernmental Oceanographic Commission
- IOTC – Indian Ocean Tuna Commission
- IPCC - Intergovernmental Panel on Climate Change
- IUCN – International Union for the Conservation of Nature
- JMA – Joint Management Area
- JNCC – Joint Nature Conservation Committee
- LSMPA – Large-scale Marine Protected Area
- MACCE – Ministry of Agriculture, Climate Change and Environment
- MCS – Monitoring, Control, and Surveillance
- MDA – Maritime Domain Awareness
- MEECC – Ministry of Environment, Energy and Climate Change
- MFBE – Ministry Fisheries and Blue Economy
- MPA – Marine Protected Area (general usage), Marine Protection Area (for SMSP)
- MSP – Marine Spatial Plan(ning)
- NDC – Nationally Determined Contributions
- NISCC – National Information Sharing and Coordination Centre
- NISTI – National Institute of Science, Technology and Innovation
- NOAA – National Oceanic and Atmospheric Administration
- NGO – Non-governmental organisation
- NPNCA – National Parks and Nature Conservancy Act
- NPOA – National Plan of Action
- NRCA – Nature Reserves and Conservancy Act
- OIP – Outer Islands Project
- PA – Protected Areas
- PCU - Programme Coordinating Unit
- PSMA – Port State Measures Agreement
- RCOC – Regional Coordination Operations Centre
- SBS – Seychelles Bureau of Standards
- SCG – Seychelles Coast Guard
- SeyCCAT – Seychelles Conservation & Climate Adaptation Trust
- SFA – Seychelles Fisheries Authority (previously Seychelles Fishing Authority)
- SIDS - Small Island Developing States
- SMSA – Seychelles Maritime Safety Authority
- SMSP – Seychelles Marine Spatial Plan
- SOA – Seychelles Ocean Authority
- SORA – Seychelles Ocean Research Agenda
- SOSF – Save Our Seas Foundation
- SST – Sea surface temperature
- SWIOFish3 – Southwest Indian Ocean Fisheries 3
- TNC – The Nature Conservancy
- UN – United Nations
- UNCBD – United Nations Convention on Biological Diversity
- UNCLOS – United Nations Convention of the Law of the Sea
- UNDP – United Nations Development Programme
- UNESCO – United Nations Educational, Scientific and Cultural Organization
- UNFCCC – United Nations Framework Convention on Climate Change
- UNSDG – United Nations Sustainable Development Goals
- WIO – Western Indian Ocean
- WIOMER – Western Indian Ocean Marine Ecoregion

REFERENCES

Agostini, V.A., S.W. Margles, J.K. Knowles, S.R. Schill, R. Bovino, R.J. Blyther. 2015. Marine zoning in St. Kitts and Nevis: a design for sustainable management in the Caribbean. Ocean & Coastal Management. 104: 1-10.

Agrippine, M., A. Anganuzzi, G. Burridge, M.T. Marie, P. Michaud, and J. Robinson. 2014. The Blue Economy. Seychelles vision for a Blue Horizon. Ministry of Foreign Affairs, Seychelles.

Andrello, M., F. Guilhaumon, C. Albouy, V. Parravicini, J. Scholtens, P. Verley, M. Barange, U. R. Sumaila, S. Manel and D. Mouillot. 2016. Global mismatch between fishing dependency and larval supply from marine reserves. Nature Communications. DOI: 10.1038/ncomms16039

Ball, I.R., H.P. Possingham, and M. Watts. 2009. Marxan and relatives: Software for spatial conservation prioritisation. Chapter 14: Pages 185-195 in Spatial conservation prioritisation: Quantitative methods and computational tools. Eds Moilanen, A., K.A. Wilson, and H.P. Possingham. Oxford University Press, Oxford, UK.

Balmford, A., P. Gravestock, N. Hockley, C.J. McClean, C.M. Roberts. 2004. The worldwide costs of marine protected areas. 101(26):9694-9697.

Beck, M.W., Z. Ferdaña, J. Kachmar, K.K. Morrison, P. Taylor and others. 2009. Best practices for marine spatial planning. The Nature Conservancy, Arlington, VA. 27 pp

BirdLife International. 2017. Important Bird Areas factsheet: Aldabra Special Reserve. Downloaded from http://www.birdlife.org on 09/11/2017.

Bohorquez, J. 2024. Updating costing and financing options to implement the Seychelles Marine Spatial Plan. Prepared for the Ministry of Agriculture, Climate Change and Environment. Submitted to the Seychelles Marine Spatial Plan Initiative, Seychelles. 78 pp.

Carolus, I. 2015. Seychelles Marine Spatial Planning Legislative and Policy Review. Unpublished report to Seychelles MSP Initiative. Mahé, Seychelles. 96 pp

Chassot, E., P. Guillotreau, and B. Gastineau. 2018. Economic value assessment of Seychelles tuna fisheries. Publication prepared for The Nature Conservancy. Submitted to the Seychelles Marine Spatial Plan Initiative and Government of Seychelles. 63 pp.

Commonwealth Blue Charter. 2021. Case study: Seychelles – using marine spatial planning (MSP) to meet the 30% marine protected areas target. Commonwealth Blue Charter, UK. 6 pp.

Day, J., N. Dudley, M. Hockings, G. Holmes, D. Laffoley, S. Stolton and S. Wells. 2012. Guidelines for applying the IUCN protected area management categories to marine protected areas. Gland, Switzerland: IUCN. 36 pp.

Ehler, C. 2014. A guide to evaluating marine spatial plans. Paris, UNESCO, IOC Manuals and Guides No. 70, ICAM Dossier No. 8. Paris: UNESCO. 98 pp.

Ehler, C. and F. Douvere. 2009. Marine Spatial Planning: a step-by-step approach toward ecosystem-based management. Intergovernmental Oceanographic Commission and Man and the Biosphere Programme. IOC Manual and Guides No. 53, ICAM Dossier No. 6. Paris: UNESCO.

Foley, M., B.S. Halpern, F. Micheli, M.H. Armsby, M.R. Caldwell, C.M. Crain, E. Prahler, N. Rohr, D. Sivas, M.W. Beck, M.H. Carr, L.B. Crowder, J.Emmett Duffy, S.D. Hacker, K.L. McLeod, S.R. Palumbi, C.H. Peterson, H.M. Regan, M.H. Ruckelshaus, P.A. Sandifer, and R.S. Steneck. 2010. Guiding ecological principles for marine spatial planning. Marine Policy 34: 955-966.

Friedlander, A.M., E. Ballesteros, J. Beets, E.K. Brown, J.M. Fay, P. Haupt, B. Henning, P. Rose and E. Sala. 2015. Biodiversity and ecosystem health of the Aldabra Group, southern Seychelles: Scientific report to the government of Seychelles. National Geographic Pristine Seas, 61 pp.

Government of Seychelles. 2020. Seychelles Marine Spatial Plan Policy. Ministry of Environment, Energy and Climate Change, Seychelles. 24 pp

Halpern, B.S., S. Walbridge, K.A. Selkoe, C.V. Kappel, F. Micheli, C. D'Agrosa, J.F. Bruno, K.S. Casey, C. Ebert, H.E. Fox, R. Fujita, D. Heinemann, H.S. Lenihan, E.M.P. Madin, M.T. Perry, E.R. Selig, M. Spalding, R. Steneck and R. Watson. 2008. A global map of human impact on marine ecosystems. Science 319, 948-952. DOI: 10.1126/science.1149345

Harris, P.T., M. Macmillan-Lawler, J. Rupp, and E.K. Baker. 2014. Geomorphology of the oceans. Marine Geology 352: 4-24.

IMaRS-USF (Institute for Marine Remote Sensing-University of South Florida) 2005. Millennium Coral Reef Mapping Project. Unvalidated maps. These maps are unendorsed by IRD but were further interpreted by UNEP World Conservation Monitoring Centre. Cambridge (UK): UNEP World Conservation Monitoring Centre

IMaRS-USF, IRD (Institut de Recherche pour le Developpement) 2005. Millennium Coral Reef Mapping Project. Validated maps. Cambridge (UK): UNEP World Conservation Monitoring Centre

Indian Ocean Commission (IOC). 2010. A regional strategy for conserving marine ecosystems and fisheries of the Western Indian Ocean Islands Marine Ecoregion (WIOMER). Draft Report. Quatre Bornes, Mauritius and Antananarivo. Madagascar: Indian Ocean Commission and World Wildlife Fund.

Indian Ocean Tuna Commission (IOTC). 2016. Yellowfin tuna update. December 2016.

Klaus R. 2015. Third Field Report for the "Consultancy for the identification of priorities for the expansion of the marine and terrestrial protected area system of the Seychelles". Report prepared for the UNDP-GEF-GoS Project "Strengthening Seychelles' protected area system through NGO management modalities" on behalf of the Government of Seychelles, Ministry of Environment & Energy, P.O. Box 445 Victoria, Mahé, Seychelles.

Lascelles, B. 2014. Marine important bird areas in Seychelles: review and update of sites qualifying for seabirds. A report for Nature Seychelles as contribution to GEF project.

Laws of Seychelles. 2012. Fisheries Act. Chapter 82. (31st March 1987) Regulation 5. Page 25-27.

Laws of Seychelles. 2012. Seychelles Port Authority Act. Section 20. Seychelles Port Authority (Extension of Port Victoria) (Declaration) Order, 2012. Page 10-11.

Levin, P.S., M.J. Fogarty, S.A. Murawski, and D. Fluharty. 2009. Integrated ecosystem assessments: developing the scientific basis for ecosystem-based management of the ocean. PLOS Biology. 7(1): 0023-0028.

Lombard, A.T., N.C. Ban, J.L. Smith, S.E. Lester, K.J. Sink, S.A. Wood, A.L. Jacob, Z. Kyriazi, R. Tingey and H.E. Sims. 2019. Practical approaches and advances in spatial tools to achieve multi-objective marine spatial planning. Frontiers in Marine Science. 6:166 doi: 10.3389/fmars.2019.00166

Maina, J., T.R. McClanahan, V. Venus, M. Ateweberhan, and J. Madin. 2011. Global gradients of coral exposure to Environmental stresses and implications for local management. PloS ONE 6(8): e23064. DOI: 10.1371/journal.pone.0023064.

MEE. 2013. Seychelles' Protected Areas Policy. Ministry of Environment and Energy. 44 pages.

Myers, B. and B-J Dobush. 2023. Towards effective implementation of the Seychelles Marine Spatial Plan – Legal Considerations and Roadmap. Report prepared for the Seychelles Marine Spatial Plan Initiative and Government of Seychelles. 45 pp

Roberts, C.M. et al. 2017. Marine reserves can mitigate and promote adaptation to climate change. PNAS.

SeyCCAT. 2024. A management-oriented research agenda for sustainable development of ocean science in Seychelles. Draft 2.0 for validation. September 27th 2024.

SeyLII. 2025. Seychelles Legal Information Institute. https://seylii.org

Skerritt, A., and T. Disley. 2011. Birds of Seychelles. Christopher Helm, London. 176 pp

Smith, J., H. Sims, W. Cosgrow, A. de Comarmond, W. Agricole, and R. Tingey. 2019. Seychelles marine spatial planning initiative – an update on milestones and implementation planning. Seychelles Research Journal 1(2): 157-161

Smith, J.L. 2018. Options for Adopting Marine Spatial Planning In: Cervigni, R. and P. L Scandizzo, Editors. The Ocean Economy in Mauritius. Making it Happen. Making it Last. World Bank. 329 pp.

Spalding M.D., C. Ravilious, and E.P. Green. 2001. World Atlas of Coral Reefs. Berkeley (California, USA): The University of California Press. 436 pp.

The Nature Conservancy. 2022. Evaluation of ecosystem goods and services for Seychelles' existing and proposed protected area system. An unpublished report to Government of Seychelles – MACCE and SWIOFish3 programme. The Nature Conservancy. 78 pp.

The Nature Conservancy. 2016. Seychelles marine spatial plan: biodiversity representation values from Marxan analyses conducted by Klaus 2015. Unpublished.

UNEP-WCMC, WorldFish Centre, WRI, TNC. 2010. Global distribution of warm-water coral reefs, compiled from multiple sources (listed in "Coral_Source.mdb"), and including IMaRS-USF and IRD (2005), IMaRS-USF (2005) and Spalding et al. (2001). Cambridge (UK): UNEP World Conservation Monitoring Centre. URL: data.unep-wcmc.org/datasets/13

UNESCO-IOC/European Commission. 2021. MSPglobal International Guide on Marine/Maritime Spatial Planning. Paris, UNESCO. IOC Manuals and Guides No. 89.

UNESCO. 1982. Assessing potential World Heritage marine sites in the Western Indian Ocean. Prepared by D. Obura, R. Walton, F. Fleisher-Dogley, N. Bunbury. http://whc.unesco.org/en/list/185

ANNEXES

Annexes are available on the SMSP website and with MACCE-MSP Unit to support SMSP implementation.

Annex 1: Goals, Objectives, and Indicators
Annex 2: Master List of Definitions
Annex 3: Master List of Meetings
Annex 4: Master List of Participants
Annex 5: Stakeholder Engagement Summary
Annex 6: Planning Tools
Annex 7: Spatial Methodology
Annex 8: Zoning Designs
Annex 9: Biodiversity Representation Data
Annex 10: Milestone 1 Nomination File
Annex 11: Milestone 2 Nomination File
Annex 12: Milestone 3 Nomination File
Annex 13: Outputs Summary
Annex 14: Reference Layers and Decision Matrix
Annex 15: References and Sources
Annex 16: Other

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