DRAFT

Seychelles Marine Spatial Plan

Version 1.0

10 February 2024

FOR DISCUSSION PURPOSES ONLY

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Subject to change upon review and revision. Subject to government approval.
This document is draft and not for distribution; not to be cited until approved.

IMPORTANT NOTES FOR THE DRAFT DOCUMENT:

- More information will be added to the draft Plan before it is finalised including the implementation governance mechanism, implementation strategies, timeline for enforcement of the Plan, and timeline for adapting the Plan in the future. The finalised draft is expected to include this text after the review period, as well as the stakeholder feedback.
- Pictures will be added. Graphics and pictures have been kept to a minimum during the review period to reduce file size.
- Annexes will be provided in separate documents and will be available on the SMSP website and through the Ministry of Agriculture, Climate Change and Environment upon request.
- Supplemental Documents will provide summary and/or detailed information about the zoning, stakeholder engagement process, and other technical activities related to the SMSP process outputs. These documents will be available on the SMSP website and through MACCE, upon request.
- Owing to the size of some Annexes and Supplemental Documents, they may be available for download from the website only.
- Professional copy edit, proofreading, formatting, and print-ready layout will be undertaken after stakeholder and public review.
- Ministry of Agriculture, Climate Change and Environment is the lead Ministry for the Seychelles MSP Initiative. Co-lead on the SMSP Executive Committee is the Ministry of Fisheries and Blue Economy.

FOR DISCUSSION PURPOSES ONLY

Publication Information

This draft report, titled the "DRAFT Seychelles Marine Spatial Plan", is presented to the Ministry of Agriculture, Climate Change, and Environment and the SMSP Executive Committee for review by stakeholders and the public. The report and accompanying documentation are in development to finalise and complete the Seychelles Marine Spatial Plan Initiative and prepare for implementation.

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Acknowledgements of stakeholder groups will be included full participation list in the annexes.

TABLE OF CONTENTS

Note: The DRAFT Table of Contents is using 4 headings or levels for the preparation of the Plan. The final document may just have 3 headings in the Table of Contents to keep it simpler and more condensed than 4 headings. To be decided.

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To be developed for final version

LIST OF FIGURES

To be developed for final version

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 the 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 2009). Marine Spatial Planning (MSP) 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 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 (source: IOC-UNESCO 2022). Approved plans range from policy documents through to regulatory plans and the length of time to develop these plans has ranged 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 the first plan, and in some cases introduced new plans (e.g., Norway) and undergone adaptations of the initial plan (Norway, Belgium).

The main concepts of marine spatial planning include:

- Multiple objectives
- Participatory
- Iterative and adaptive
- Balances economic development and environmental conservation.
- Multi-sector zoning design, not single sector

Marine resources are "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 private property where there is 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. MSP 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 [-]. General Steps for Marine Spatial Planning (adapted from UNESCO 2009)

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

The Seychelles MSP followed global best practices for marine spatial planning and for the development of marine protected areas using international guidebooks and guidelines from IOC-UNESCO, IUCN, and others.

The best practices of marine spatial planning include:

- Ecosystem-based
- Inclusive
- Participatory
- Transparent
- Equitable
- Science-based
- Feasible and implementable

Benefits and Challenges of MSP

Marine Spatial Planning (MSP) offers several benefits for sustainable ocean management by balancing ecological, economic, and social interests. These include:

Environmental Benefits

- Protects marine ecosystems through identification and designation of representative conservation areas and reducing 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 & 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, Marine Spatial Planning (MSP) is a complex process that involves managing ocean spaces for multiple uses while balancing environmental, economic, and social interests. Some key challenges include:

Conflicting Interests

- Different sectors (e.g., fisheries, tourism, shipping, conservation, offshore energy) compete for the same space, leading to conflicts.
- Stakeholder engagement is often difficult due to varying priorities and levels of influence.
- Data Gaps and Uncertainty
- 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 down 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 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 for global biodiversity was the Aichi Targets from the Rio+20 conference, with a global goal for 10% protection of lands and waters by 2020. This and other policy commitments by the Seychelles government have informed the development of the MSP and the designation of new marine protection areas. The list of international policy commitments has grown during the development of the MSP and includes, but is not limited to:

- Convention on Biological Diversity (CBD) Aichi targets
- UN Sustainable Development Goals (SDG)
- Port State Measures Agreement (PSMA)
- National Plan of Action (NPOA) – Sharks
- Global Biodiversity Framework
- Paris Agreement
- UN Framework Convention on Climate Change (UNFCCC)
- High Level Panel for Sustainable Ocean Economy
- High Ambition Coalition
- International Maritime Organisation (IMO)

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 tuna 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 up to 30% marine protection in its Exclusive Economic Zone and a developing a comprehensive marine spatial plan to ensure representative species and habitats have long-term protection, to improve resiliency of coastal ecosystems with a changing

climate, and ensure economic opportunities for fisheries, tourism and other uses. The extent of marine protected areas in 2012 was 0.004% 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 Vallee 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 exists near the coast and offshore. Marine and coastal biodiversity has been fundamental to the socio-economic development of the Seychelles since the late 18th century (GoS, 2014) 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 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 amongst 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 square km, 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 (Protected Planet, 2024). In the ocean, 18 areas had been designated for protection as of 2014, but these were mostly in shallow waters, near the islands, are not fully representative of all the marine habitats and species that occur in Seychelles. They were less than 1% of the ocean under Seychelles jurisdiction, did not address current conflicts amongst uses, and there were multiple threats to the ocean ecosystem that were not being addressed. With a high level of endemism at 50-85% for different animal groups and 45% for plants, (GoS, 2011) it is unsurprising that the 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 ensure a sustainable socio-economic development of Seychelles by a judicious use and management of the resources of Seychelles*".

Seychelles was the second country to sign the CBD in June 1992 and became a party that same year. One of the Aichi targets of the CBD 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 WIO to establish a network of MPAS in the 1960s, the total area of MPAs in Seychelles remains 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.

In June 2012 at the Rio+20 conference, the then Seychelles' President made a commitment to declare 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 (GoS, 2013; NISA, 2011; Statehouse, 2017). This goal would exceed the 10% target which is set by the Convention on Biodiversity for the National Marine Territory. From the commitment made in 2012, the MSP initiative is now a necessary output of the award-winning government-led Debt-for-Climate-Change-Adaptation swap, the negotiation of which was finalised in February 2016. The debt swap is a significant, globally recognised innovation that holds the Seychelles government accountable to delivering a marine spatial plan that will result in 400,000 square kilometres of improved marine resource management. The marine spatial plan is 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 Marine Spatial Plan (SMSP) Initiative is 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 is a Government-led process, with planning and facilitation by The Nature Conservancy (TNC) in partnership with Government of Seychelles – UNDP GEF Programme Coordinating Unit (PCU), now named the Programme Development and Coordination Section (PDCS). Funding for the Initiative was provided through a number of grants to Government of Seychelles and private awards to TNC.

The SMSP Initiative is an integrated, multi-sector approach with three objectives:

1. expand marine protections
2. address climate change adaptation
3. support the Blue Economy (and other) national strategies.

The process engages with more than 12 marine sectors of the Seychelles including fishing, tourism and marine charters, biodiversity conservation, renewable energy, port authority, maritime transport and safety, and non-renewable resources in order to develop a comprehensive marine plan with 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.[1] 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. 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; and
- 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 as a result has claimed archipelagic waters as defined by UNCLOS. Additionally, Seychelles has made claims for an extended continental shelf, pursuant to article 76 of UNCLOS.

[1] Const. art. 2. 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 38 of the Seychelles Constitution 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 ensure a sustainable socio-economic development of Seychelles by a judicious use and management of the resources of Seychelles”. This Article and the guiding principles of the Seychelles Sustainable Development Strategy (SSDS) 2012-2020 provide an overall goal for the MSP Initiative: 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. This multi-use plan will guide the strategies and decisions of the Seychelles Conservation & Climate Adaptation Trust (SeyCCAT) established as part of the Debt-for-Climate-Change-Adaptation swap.

Of special note are Seychelles’ protected areas legislation and environmental legislation. The NPNC Act was the key mechanism for designating and managing MPAs, which was replaced by the NRC Act 2022. The Environment Protection Act 2016 was essential as a source of legal authority for EIA and will also provide the legal basis for an “interim” governance arrangement for the SMSP that is to be situated within the Ministry for Agriculture, Climate Change and Environment (MACCE).

Planning Boundary

The marine planning area contains existing zones, notably fishing exclusion areas, fee boundary for the Port of Victoria, and gazetted marine protected areas (Figure [-]). All existing legally designated zones were incorporated into the zoning design process. See: Zoning Methodology.

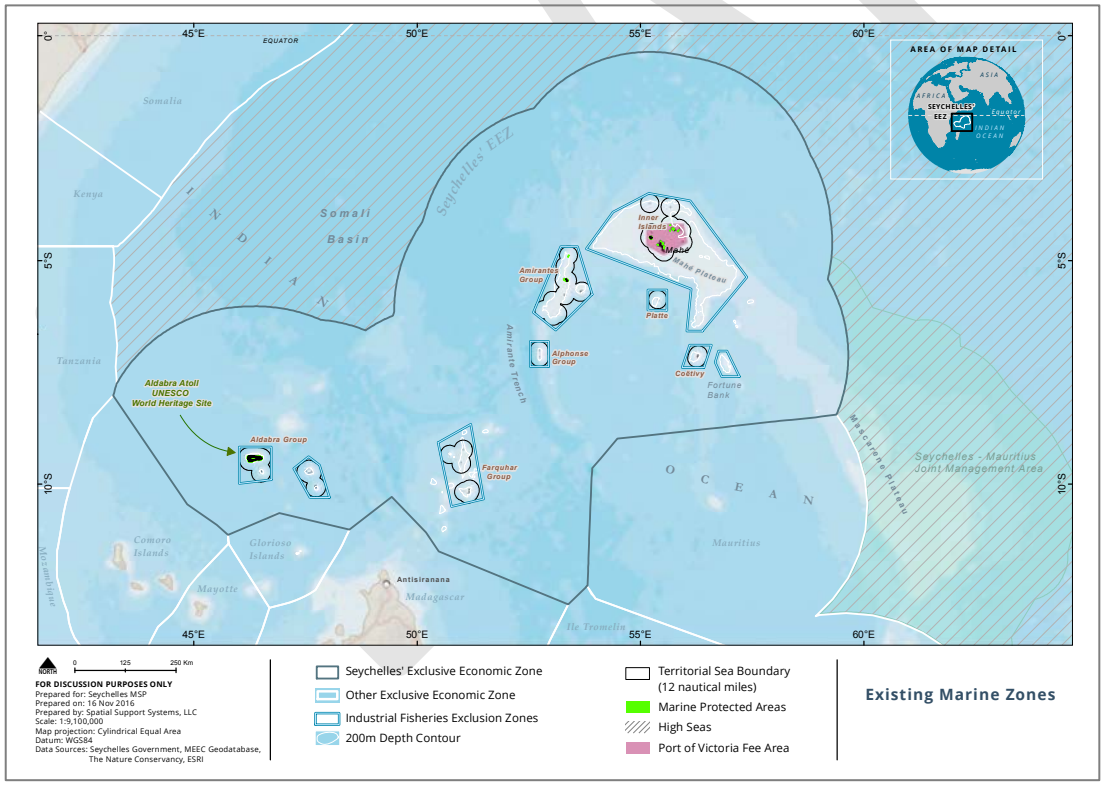

Figure [-]. Existing marine zones in Seychelles within the planning boundary. Additional areas that are demarcated on nautical charts include the Areas to be Avoided on Mahe Plateau and surrounding Aldabra Atoll.

Chapter 2: Seychelles MSP Initiative

DESCRIPTION OF SEYCHELLES MSP INITIATIVE

The development of the Seychelles Marine Spatial Plan is being facilitated by and integrates a number of different projects in Seychelles that are focused on improving ocean management, including the following:

- GoS-UNDP-GEF "Strengthening Seychelles PA 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
- BIOFIN Project
- GoS-UNDO-GEF "Protected Areas Finance Project"
- Debt-for-Climate-Change-Adaptation swap (Debt swap)
- Seychelles Conservation and Climate Adaptation Trust (SEYCCAT)- Blue Grant Fund Projects
- South West Indian Ocean Fisheries 3 Programme funded by the World Bank (SWIOFISH3).
- GoS-UNDP-GEF 7 "Prioritising Biodiversity Conservation and Nature-based Solutions as Pillars of Seychelles' Blue Economy" project
- Regional Adaptation Fund Coral Restoration Project
- 2 regional IKI funded projects
- BNA Grant to SeyCCAT "Seychelles Marine Protected Area Network" Project
- O5 Grant to SeyCCAT "Enabling the Seychelles Marine Spatial Plan"
- PEW (Phases 1,2 and 3) grant to SeyCCAT "Coastal Wetlands and Climate Change# Project

Vision and Goals

Vision mapping was undertaken early in the SMSP process to guide the development of objectives and the design of the MSP process. A 2-day visioning workshop was held in Feb 2014 before the launch of the MSP process. From this vision workshop emerged three goals for the SMSP.

1. Increase Marine Protected Areas by 30%
2. Support the Blue Economy
3. Address Climate Change Adaptation

SMART Objectives

Marine spatial planning is best achieved and most successful when conducted based on an "objective-based approach". 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. Ideally goals and objectives will be derived from problems or issues in the marine area and will reflect a set of MSP principles. Clearly identifying goals and objectives is thus a cornerstone of marine spatial planning and aligns with global best practices for organising a planning process (IOC-UNESCO 2009).

Goal – a statement of general action or intent. Goals are high level statements of the desired outcomes that you hope to achieve. 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

Drafting of SMART objectives began in May 2014. The initial stakeholder workshops and group sessions identified more than 10 SMART objectives (Table 2-A)(WS2 Report 15 May 2014). The final version of the SMART objectives was approved by the MSP Executive Committee on 29 July 2022.

Goal 1: Increase Marine Protection Areas by 30 percent.

Identify new marine protection areas 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

Develop Allowable Activities Tables with sustainability criteria for MSP Zones by 2022 to support the Blue Economy Agenda throughout the Seychelles' coastal and marine environments.

Goal 3. Climate Change Adaptation

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.

Activities and indicators were identified or developed for the SMSP SMART objectives in consultation with the government agencies, SMSP stakeholders, and local experts. The activities support also 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: Indicators (folder #22)

Scale and Scope

The geographic scope is the entire 1,351,000 km2 of the Territorial Sea and Exclusive Economic Zone (EEZ).

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. The Seychelles MSP extends to the 200 nautical mile limit and does not include the Joint Management Area (JMA) with Mauritius, extended continental shelf areas or the high seas (Areas Beyond National Jurisdiction).

The SMSP planning boundary is from the mean high-water mark to the boundary of the Seychelles Exclusive Economic Zone., The SMSP includes all marine waters within this boundary. The SMSP planning boundary does not include brackish water or inlets on Mahe Island.

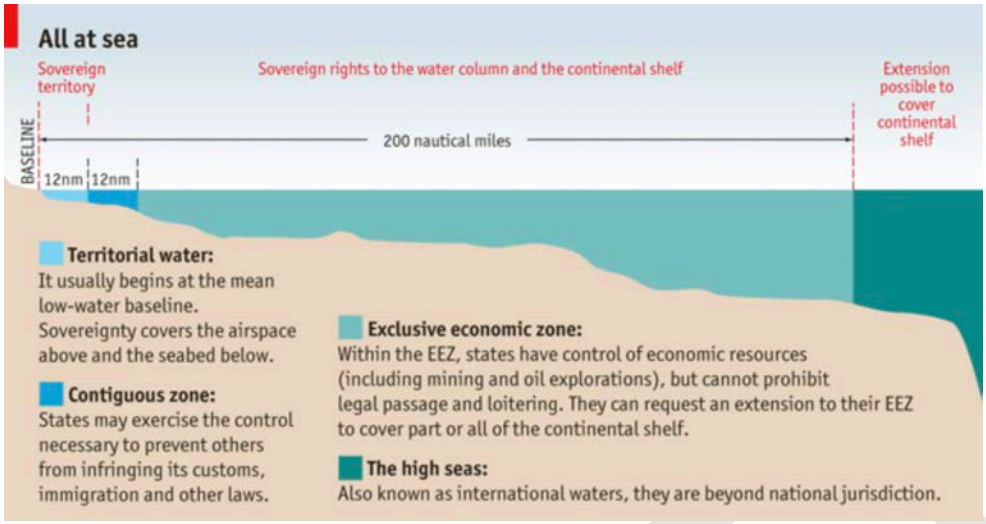

Figure [-]. Maritime boundaries as defined by the UN Convention of the Law of the Sea, UNCLOS. Source: The Economist.

The geographic scale is at both coarse and fine scale with planning units at 1 km^2 in shallow waters less than 200 m and 50 km^2 in waters greater than 200 m depth. The SMSP has developed this systematic planning unit approach whereby all data are attributed to 1 km^2 or 50 km^2 "cells" in the marine space, for shallow and deep habitats, respectively. This approach means that in the future, data can be updated and new analyses conducted about the economic contribution of fisheries and other uses to the Blue Economy

- Analysis units are scaled for Inner Islands and the Outer Islands.
- Analysis Units are 1 km^2 less than 200 m depth
- Analysis Units are 50 km^2 equal to and greater than 200 m depth

During a February 2014 workshop with stakeholders, medium and high priority planning goals were also identified. This workshop also helped to organise the MSP into seven themes: fisheries, tourism, biodiversity, cultural heritage, petroleum, marine transportation and renewable energy.

The scope of planning was revised to five themes within the Seychelles EEZ boundary.

Planning focused on these key marine sectors in Seychelles:

- Biodiversity conservation
- Fisheries (domestic, subsistence, and international tuna)
- Marine Infrastructure and Public Utilities
- National Security & Maritime Safety
- Marine Transportation and Shipping
- Non-renewable Resources
- Renewable energy
- Tourism and Recreation (including sport fishing)

MSP Sector Themes:

- Fisheries
- Biodiversity Conservation
- Infrastructure and Public Utilities
- Non-renewable Resources
- Tourism and Recreation

Out of scope were land-based activities and land-based sources of pollution plus the Seychelles-Mauritius Joint Management Area outside the Seychelles EEZ and the extended continental shelf area in the North of the Seychelles EEZ. 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. For the Joint Management Area, the planning considers the benefits and impacts of zoning in relation to this area and the implications for conservation and economic development in the future. The infrastructure theme includes energy, ports, maritime security & safety, shipping, transportation, submarine cables and other physical infrastructure and support agencies or authorities.

GUIDING PRINCIPLES

The guiding principles of the MSP Initiative lay the foundation of the MSP process and determine the basic or essential qualities of the process and its outputs. The Seychelles MSP Initiative developed 'Guiding Principles' during stakeholder consultations in 2014-2015:

- Integration and coordination with all Laws, Regulations, Acts, Legal Agreements, National Policy, Authorised Management Plans in Seychelles. Integration with national strategies, coals, 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 MSP outputs.
- Balance ecological, economic, social, cultural objectives in development of the plan
- The outputs of the plan must be feasible, practical, implementable, and financially sustainable.
- The marine spatial 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 MSP outputs.

Governance Principles. Ensure the marine spatial plan is:

- Abide by national Laws, Regulations, Acts

- Respect International Agreements
- Integrate and identify gaps in existing Policy, Management Plans, Strategies, Action Plans
- Ensure Transparency, Inclusivity, Participation
- Integration, Co-management
- Uphold Environmental Stewardship
- Ensure Equity and Sustainable Development

Approach and Practice Principles. Ensure the marine spatial 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 MSP Initiative to achieve a marine protection goal by 2020, in accordance with the debt swap and Seychelles loan agreement (Figure [-]). 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 Exclusive Economic Zone and Territorial Sea.

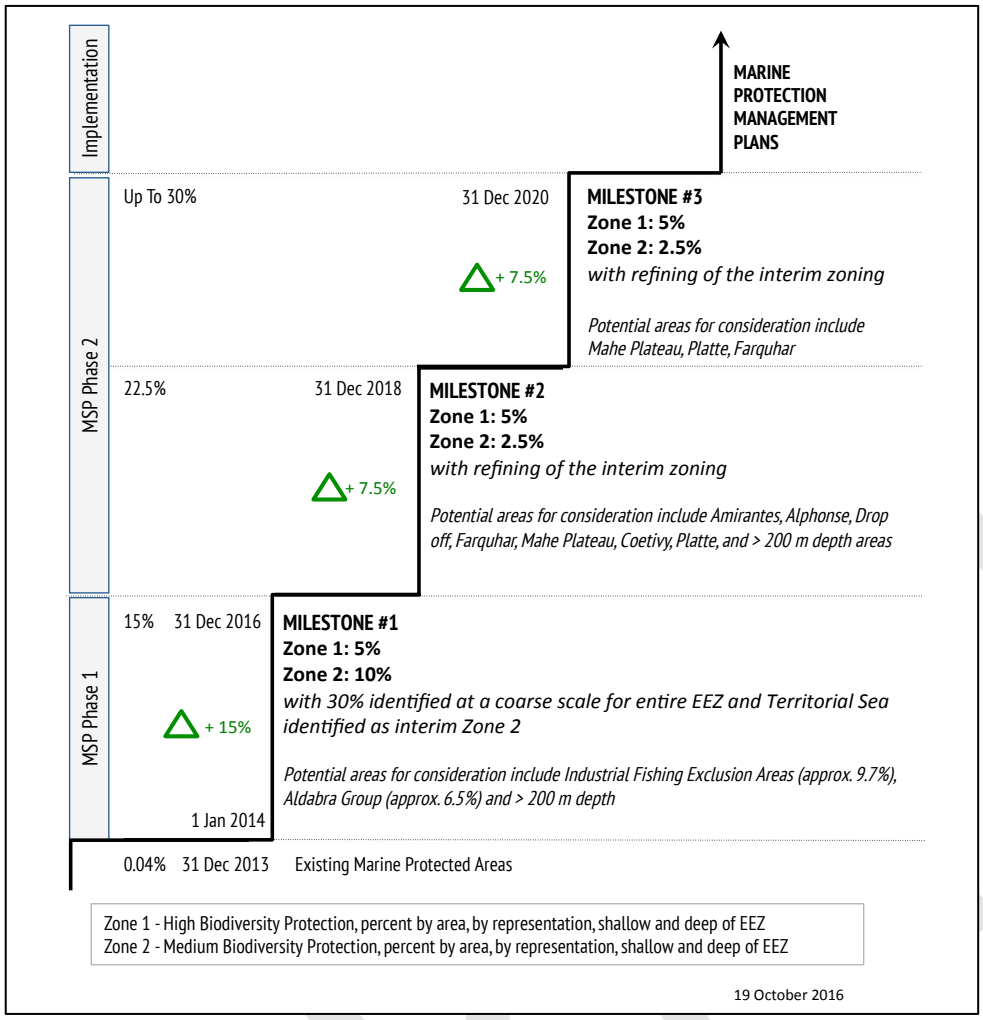

Figure [-]. Phased approach to achieve marine protection and marine spatial plan goals.

Planning in Phase 1 was done at a coarse scale to address broad ecological, economic and social objectives. Planning in Phase 2 was at a finer scale and refined areas proposed for marine protection.

The SMSP Phase 1, Milestone 1 zone areas were gazetted in Feb 2018 and reached a 15% goal for marine protections. This fulfilled the first milestone requirement of the Seychelles debt swap and delivered on Seychelles' commitment to the UN Sustainable Development Goals (SDG 14.4) and UN Convention on Biological Diversity Goal (protect 10% of marine waters by 2020).

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 Ministry of Environment, Energy and Climate Change (MEECC). Milestone 2 reached 26% in marine protection areas, 350,915 sq. km.

Phase 2, Milestone 3 was 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 as protected on the 26th of March 2020 under the National Parks and Nature Conservancy Act (NPNCA).

The MSP 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 this legislation, the Nature Reserves and Conservancy Act (NRCA) in 2022, the Zone 2 areas have been re-categorised in Sustainable Use protection category.

Governance Structure

The governance and decision-making structure were designed in early 2014 and was adapted over time to respond to issues that arose to improve decision-making and inputs from stakeholders for a transparent and equitable participatory MSP process.

The Governance Framework was designed to include representation from all the marine sectors representing the five major themes of the MSP: fisheries, biodiversity, infrastructure and utilities, non-renewable energy, and tourism.

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

The first task was to develop a decision-making structure or framework for the planning process and identify steering committees and working groups. This is called the SMSP Governance Structure and was an essential step for transparent and participatory decision making.

The governance and process structure of the Seychelles MSP Initiative has a number of components, including an Executive Committee, Steering Committee, Technical Working Groups and Executive Management. The MSP Steering Committee provides management leadership and oversight to the MSP Initiative and reports to a Ministerial group. Executive decisions for the MSP Initiative are made by a GoS Ministerial Group. Technical Working Groups advise and provide guidance to the Steering Committee and develop planning products for the MSP. Members of these groups include non-government organisations, public and private sector to represent ecological and socio-economic activities. Technical and administrative support for the MSP is provided by TNC staff, consultants, MACCE Ministerial Secretariat, and UNDP-GEF PCU.

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 MSP 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 swap and SeyCCAT.

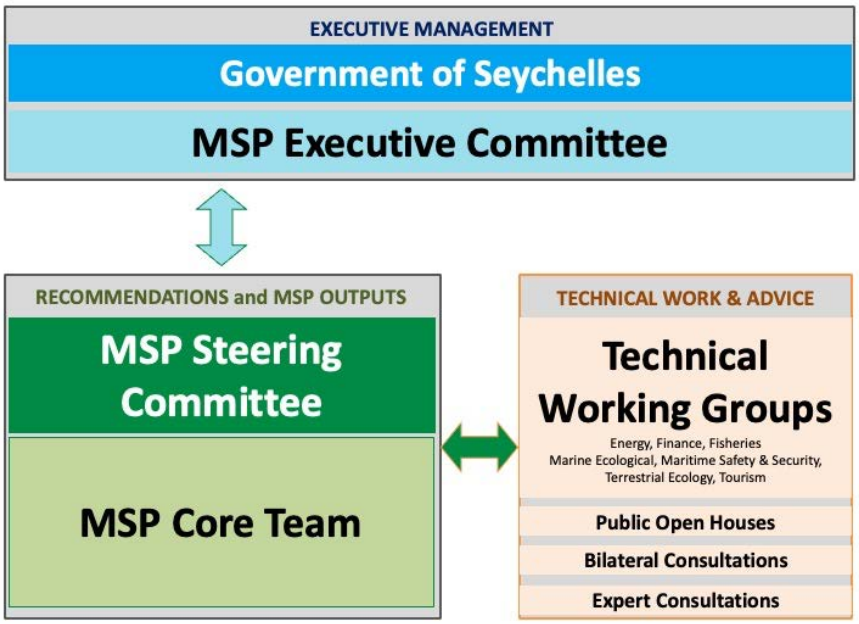

Figure [-]. Governance structure for decision-making for the Seychelles MSP process.

A process diagram was developed to indicate the iterative nature of the SMSP process and the relationship between the stakeholder engagement structures. Importantly, the iterative process had a clear flow of information, inputs, and recommendations from the Technical Working Groups, bilateral, public information sessions and Steering Committee to the Executive Committee. In the latter half of the MSP process a 'short process' was introduced between the SC and EC committees when decisions were being brought to the EC and additional information was needed, or a review of the recommendation, by the SC before approval from the EC (Figure [-]).

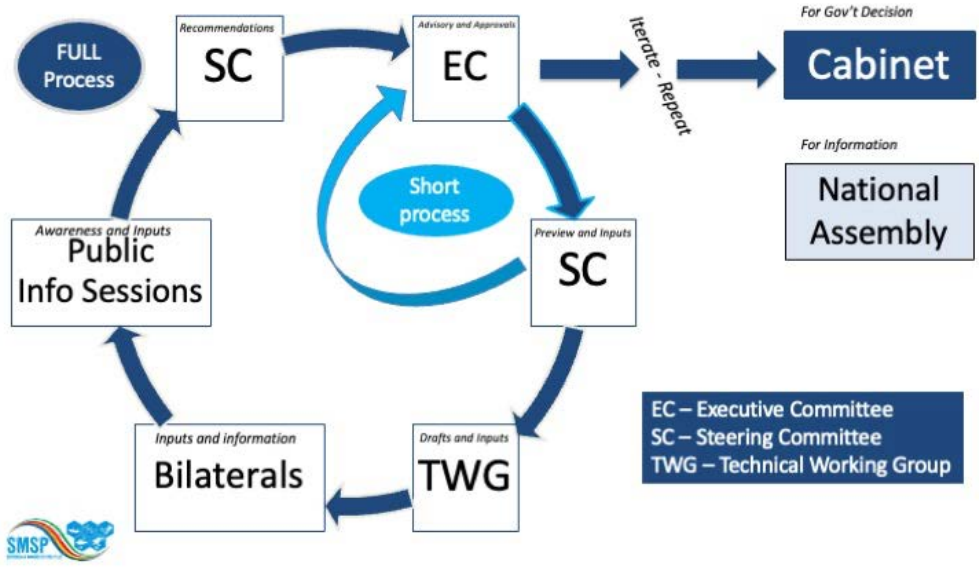

Figure [-]. Iterative decision-making process diagram for the Seychelles MSP process, based on the governance structure.

SMSP Executive Committee

The MSP Executive Committee will be responsible for all recommendations and decisions being made at the level of Executive Management in the MSP Governance Framework. Before the marine spatial plan is presented to Cabinet, the Executive Committee will be responsible for seeking endorsement of the marine spatial plan from the marine stakeholders engaged in the process. The Executive Committee did not have observers.

SMSP Steering Committee

Steering Committee 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 MSP Steering Committee.

The MSP Steering Committee will provide 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 Steering Committee is 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 MSP Initiative. The Steering Committee will provide their recommendation(s) on planning outputs to the Executive Committee for approval before outputs are presented to MSP Stakeholder Workshops and for public open houses.

SMSP Technical Working Groups

The Technical Working Groups were launched in July 2014 to introduce the concept of zoning and confirm the TWG Terms of Reference. Initially there were three TWG: Socio-economic group, marine ecological group, and terrestrial ecological group (Aug 2014) and with stakeholder feedback the structure of groups was adapted and revised to created seven groups: Energy, Finance, Fisheries, Marine Ecological, Maritime Safety & Security, Terrestrial Ecology, and Tourism.

The MSP TWGs were comprised of representatives from the five major thematic areas of the MSP: 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 with the sector in a part-time or full-time employee, consultant, advisor or appointed position to the relevant government ministries, parastatals, the private sector, NGOs, or civil associations. Alternate members should also be appointed, for continuity and familiarity purposes in case the member is 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 is no minimum or maximum for the number of members in each Technical Working Group; the aim is to have representation for each sector.

A Chair and co-Chair from each TWG will be nominated by each respective TWG to serve on the MSP Steering Committee (for a total of fourteen TWG members). At each Steering Committee meeting, the Chair or co-Chair are asked to attend and participate (i.e., minimum seven TWG members).

On occasion, guests or observers may attend or participate in TWG meetings at the request of the MSP Core Team and/or TWG members when specific topic expertise or information and products to address questions on specific topics is required or needed. All requests for guests or observers must be presented to the MSP Core Team at least three (3) 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 MSP 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 this 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 MSP 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 communication's consultant (specific deliverables) and a project coordinate (part-time). The MSP Core Team facilitated and led the MSP process on behalf of the government including, but not limited to, all technical work, communications, project management, stakeholder engagement. The core planned for and scheduled all stakeholder committee workshops and meetings, providing written reports for each meeting which were posted to the SMSP website. The MSP Core Team developed all agendas, background materials, technical presentations, venues, and other meeting details for stakeholder consultations.

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

- What is the Seychelles Marine Spatial Plan Initiative?
- Why Marine Spatial Planning (MSP) for the Seychelles?
- How is the MSP initiative structured? Who is involved?
- Guiding Principles of the MSP Initiative?
- MSP Methodology "101"
- What will the MSP Initiative outputs be?
- How long is the MSP 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 and 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 Technical Working Group meeting was held in July 2014 to begin discussions about the zoning design and process. The first Steering Committee meeting was held in August 2014 to discuss roles and responsibilities and draft zoning proposals. The Executive Committee was formed two years into the process and the first meeting held in October 2016.

Stakeholder Workshops

Stakeholder Workshops were initiated in Feb 2014, with the official launch of the MSP 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 Steering Committee and Executive Committee 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 MSP 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. Notes for these meetings were taken for the SMSP core team records.

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 Steering Committee and Technical Working Groups. The Executive Committee members were excluded from the Honorarium program. An Honorarium Policy document was developed with inputs from the Executive Committee and approved on 19 October 2018. Previous to the approval the SMSP process was working 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 MSP process. The core team's experience with other planning processes for MSP and MPAs in Seychelles and globally provided useful guidance on best practice for engaging with stakeholders.

Stakeholder engagement was extensive and the SMSP was the most participatory process that Seychelles has undertaken for marine or land use planning. More than 310 workshops and meetings have been held since 2014 including with Cabinet, National Assembly, Executive Committee, Steering Committee, Technical Working Groups, stakeholder workshops, public information sessions and bilateral consultations (Figure [-]).

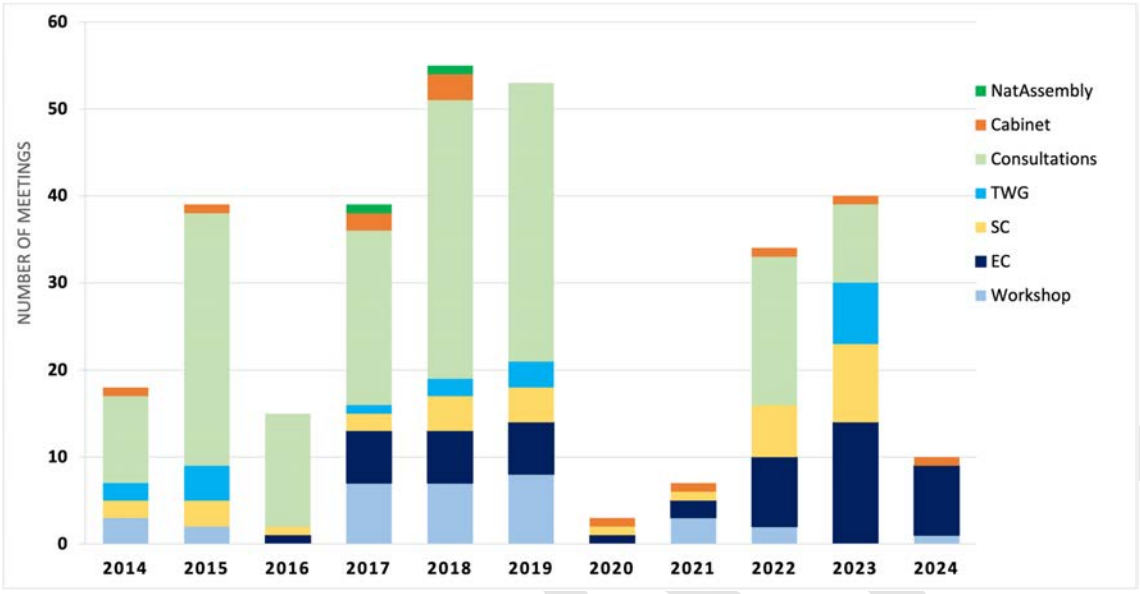

Figure [-]. A summary of stakeholder engagement for the SMSP process from 2014-2024

A full analysis and summary of the SMSP stakeholder engagement is underway, supported by the process documentation and advice log, and will be developed for a Supplemental Document. The SMSP used lessons learned from around the world to design the stakeholder engagement and participation process, and is committed to share detailed information that may benefit other MSP processes.

Advice Log

The advice log is an essential planning tool that is commonly used in MSP to compile stakeholder advice so that queries or summaries can be produced or developed on process topics or themes. With lessons from other MSP around the world, such as the Marine Plan Partnership of the North Pacific Coast (MaPP) in Canada, the SMSP process used an 'advice log' in MS Excel to compile all of the comments received during stakeholder committee meetings and workshops. The primary purpose was to track all of the advice received as an archive. Secondarily, the advice log was used to find all the inputs from stakeholders on particular topics. For example, during the course of the MSP process, the advice log was queried to create a summary of comments and viewpoints for the Executive Committee to inform decision-making on these topics:

- Amirantes Group
- Artisanal fishing
- Assomption island
- Bird Island
- D'Arros
- Oil & Gas
- St Joseph

- Subsistence fishing
- Use of motorised devices/ motor watercraft (jet ski)

Communications

In a public, participatory and inclusive process, the MSP is balancing transparency and inclusivity with respect and sensitivity for the stakeholder inputs. During workshops and committee meetings, inputs were provided that may be draft or may contain confidential or proprietary information. Social and cultural information may be provided that needs to be kept confidential or there may be risks to the long-term preservation of the cultural value in its location.

The SMSP process team consistently balanced transparency and confidentiality throughout the zoning process and communicated the information to all stakeholders for their inputs. The methodologies were summarised for the Steering Committee and Executive Committee and approved before being implemented.

The SMSP website was an important location to feature and locate all key documents. However, documents could not be uploaded and shared publicly until they were approved. See Lessons Learned and Challenges.

A communications plan was drafted in 2015 to guide the external communications for the SMSP process. Capacity to develop regular updates or newsletters was low however the aim was to produce two newsletters a year with updates for the stakeholders and general public.

A Frequently Asked Questions 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 days of the SMSP Initiative.

The SMSP website was first developed in 2014 to share information about the MSP process, post events and news. The website was the most important source of information to share with stakeholders and the public about the MSP process. The website contains dates for events and workshops, multiple menus to upload content that was finalised or approved as well as general information about the process.

Social media was discussed several times during the planning process. Early on a decision was taken by the Executive Committee and government that the SMSP process would not use social media such as Facebook and Instagram to share information. Information on the SMSP could be shared through respective Government platforms such as the Ministry responsible for Environment's website or social media pages. One of the reasons for this was that the SMSP core team was small and capacity was limited to monitor and respond to comments on social media. In addition, it was important to convey that the Government leads on the SMSP and already had personnel in place to manage those platforms.

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 marine spatial plan in Seychelles. Phase 2 included refining the zoning design and management considerations for the Phase 1 areas and identifying the remaining areas for the 30% marine protection goal and improved management for all Seychelles' waters including advancing sustainability in support of the Blue Economy agenda and other national priorities. In Phase 2, implementation was developed including for the implementation governance mechanism, costing and financing, capacity analyses, and priority activities. The outputs of the SMSP include 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 PCU)
- MSP 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: Milestone 2 and 3 (2018-2020)

- MSP Atlas
- Climate-change Risk Mapping
- Final Zoning Design
- Allowable Activities Tables draft
- Marine Spatial Plan draft
- Ecosystem Services for Marine Protected Areas
- SMSP Policy
- Management Plans (consultants)

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

971 Box: High-level Process Summary and Key Milestones for Seychelles MSP

Year	Timeline or Milestone
2008	IMF 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) (June)
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
2013	Debt swap agreement negotiations underway for $80M in debt restructuring
2014	Government of Seychelles commits to comprehensive marine spatial planning for EEZ
2014	Seychelles MSP Initiative started, facilitation by The Nature Conservancy
2014	MSP 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 MSP zoning design presented to stakeholders (Jan)
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 MSP to focus outside Territorial Sea for firsts zones (August)
2015	Decision taken to structure MSP in two phases and three milestones (September)
2015	Draft management plan for demersal fisheries on Mahe Plateau stakeholder review
2016	Debt swap agreement finalised for $21.6 M (Feb)
2016	SEYCCAT operational (November)
2017	Draft MSP zones proposed for Phase 1 (June)
2017	World Bank approves USD $20M in sustainable fisheries and resource management
2017	Draft Seychelles MSP Policy
2017	SEYCCAT Blue Grants first call for proposals
2017	Cabinet approval demersal fishery co-management plan of Mahe Plateau
2018	Milestone 1 areas designated by MEECC (Apr 2018)
2018	Consultancy started for developing Implementation and Governance Arrangements
2018	Economic value assessment of Seychelles tuna fisheries.
2019	Milestone 2 areas designated by MEECC (Feb 2019)
2020	Milestone 3 areas designated by MEECC (Mar 2020)
2020	Global Pandemic – consultations paused
2020	MSP Policy approved by Cabinet (Oct 2020)
2022	SMSP consultations relaunched following pandemic
2022	Interim SMSP governance mechanism – Seychelles Ocean Agency
2022	SeyCCAT Act amendment
2022	Nature Reserves and Conservancy Act
2022	Maritime Zones Orders (Baseline, Territorial Sea, Contiguous Zone and EEZ)
2022	Evaluation of Ecosystem Goods & Services for Seychelles' Existing & Proposed PA System
2023	Regulations for Criteria for the classification of Marine Protection Area under NRCA
2023	Finalise Allowable Activities Tables and associated documents
2023	Reclassification of the 8 AONB (zone 2 areas) as Sustainable Use areas
2023	MSP Unit formed for SMSP implementation
2023	Legal Considerations & Roadmap for implementation of the SMSP
2024	Exec Committee approves Allowable Activities Tables
2024	Developing legal tools to sign the MSP into law
2024	SMSP costing analysis 2.0
2024	Government endorsement of management plans for 3 sustainable use areas
2025	Capacity needs assessment and building plan for the SMSP and MPAs of Seychelles

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PLANNING TOOLS

Marine Spatial Planning tools are used around the world to support decision-making and discussions. 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 describes patterns of human use and biodiversity across the planning area. For many geographies there does not exist a comprehensive spatial database of this nature, 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. 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 MSP 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; (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 throughout the duration of the MSP process, from multiple government and non-government entities, 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 MSP Core Team and partners, supporting the development of alternative zoning design scenarios, the evaluation of progress towards high level MSP 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 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 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 MSP data manager.

Compatibility Matrix

During Milestone 1, a compatibility matrix was developed to support the discussions about allowable uses and activities and creating a zoning design. Examples for compatibility matrix were reviewed from the St Kitts and Nevis MSP 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 over the course of # stakeholder workshops and meetings starting in June 2014. Fourteen versions were created with refinements on the marine sectors as well as the recommendations on the spatial conflict levels.

A spatial analysis was done in Milestone 1 to examine the known distribution of marine uses and activities, and where they overlapped within the EEZ. From this coarse-scale analysis, the results showed that the 'hotspot' of spatial conflict – where more than 5 themes overlapped – was just east of the Mahe Plateau, between the drop-off and African Banks. [Rick - do we have a graphic/screenshot of this still?]

04-Jul-14

This is a DRAFT for discussion purposes only. Input is needed from the MSP Technical Working Group to ensure accuracy and proper representation of the uses, activities, and their definitions.

Compatiblity matrix assumption: If two activities overlapped in time and space, what is the compatibility?

Seychelles activities for zones - from workshop #2	Conservation	Ferries	Fishing - industrial tuna	Fishing - nearshore	Fishing - recreation	International shipping	Marine Aquaculture	Marine Protected Areas	Minerals and Aggregates	Petroleum extraction	Public recreation	Reclamation	Renewable Energy	Seychelles Culture	Sustainable Tourism
Conservation															
Ferries															
Fishing - industrial tuna		no overlap													
Fishing - nearshore			no overlap												
Fishing - recreation			no overlap												
International shipping				no overlap	no overlap										
Marine Aquaculture			no overlap												
Marine Protected Areas															
Minerals and Aggregates															
Petroleum extraction															
Public recreation			no overlap												
Reclamation															
Renewable Energy															
Seychelles Culture															
Sustainable Tourism															

KEY	
compatible	green
somewhat compatible	yellow
somewhat incompatible	orange
incompatible	red

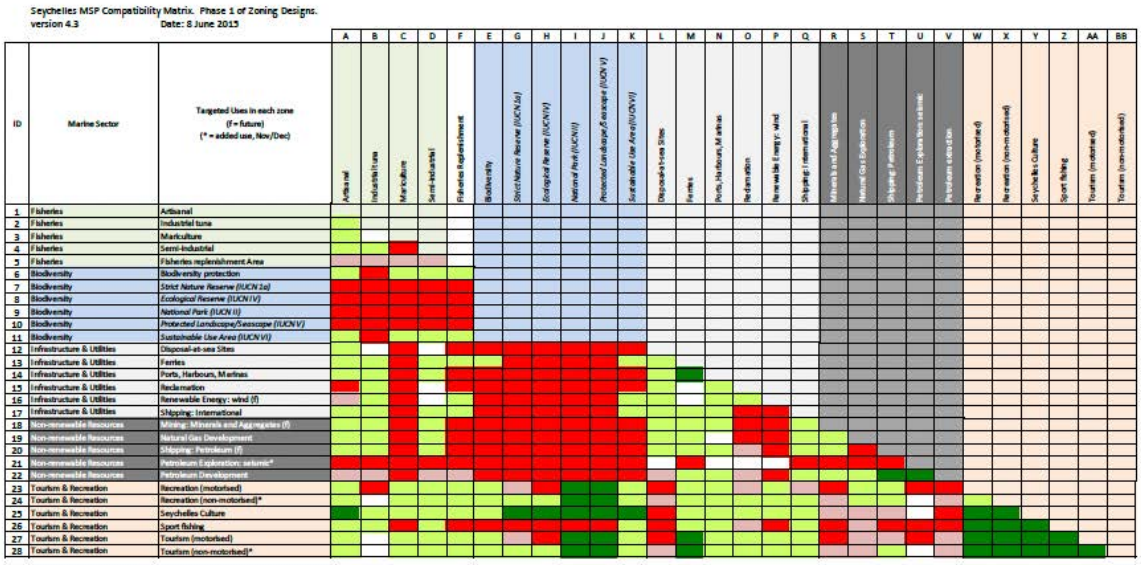


Figure [-]. Compatibility matrix developed during the SMSP process, to inform the zoning framework and zoning designs.

Participatory Mapping

An essential consideration in any data-poor geography is how to capture information that is available locally and in the community. The SMSP used Adobe GeoPDF tools for participatory mapping, especially for those sectors where data were not available during the zoning design process. See: Supplemental Document.

Considerations for participatory mapping:

- Internet connection and band width or speed
- Stakeholder locations and ability to travel to the main island (Mahe)
- Coarse vs fine scale
- Sport fishing and 16 km from the drop-off
- Fishing data resolved at minimum 3-boat rule
- ¼ degree grid cells for the industrial fishing data
- No catch effort data available, only locations, for artisanal fishing
- Sea cucumber data were not available 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" define 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 MSP zoning designs. Specifically, hexagonal units of 1 km² were designated for relatively shallow areas with a depth of up to 200 meters, whereas larger units of 50 km² were defined for deeper 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 MSP process.

MSP Atlas

The SMSP used paper and digital maps for the entire zoning design process, relying heavily on a 40 map Atlas and a 25-map mini-Atlas. All MSP Steering Committee members received a printed mini-Atlas with the key maps for stakeholder discussions. At each workshop and meeting, additional copies of the mini-Atlas plus two copies of the full 40 map Atlas were available to all participants. In addition, the digital atlas maps in PDF form were saved to jump drives and could be used on personal laptops during workshops and between consultations.

The SMSP Atlas will be available in print and digital versions for implementation.

Climate Change Risk Mapping

The Blue Economy in Seychelles is dependent upon a healthy marine ecosystem. The SMSP has developed climate change risk mapping for coral reef habitats and has used resilience principles throughout the zoning design such as replication, connectivity and representation. For the Nationally Determined Contributions (NDC), led by MACCE and supported by TNC, SeyCCAT, and Pew, the MSP is assisting with data for seagrass, mangroves and coral reefs. Seychelles' updated NDCs were submitted in July 2021 and include a commitment to apply nature-based solutions comprising mangrove and seagrass protections and a commitment to implementation of the MS. The success of the UNFCC COPs to raise global awareness for the urgent importance to address climate change threats in the ocean and rapidly increase awareness and understanding of linking climate change goals - including the UNFCCC Race to Zero Campaign , biodiversity protection and economic growth and development.

Climate change risk mapping was carried out using SST and Chlorophyll a signatures and has informed the zoning design process. Seychelles implementation of the Blue Economy and recognition of the high BD values in the marine environment were also captured in the UNFCCC National Determined Contributions, or NDCs. MACCE together with partners (SeyCCAT, PEW and TNC) are advancing work on Nationally Determined Contributions in support of Seychelles' climate change and climate financing strategy. The purpose of climate change risk mapping was to analyse 10+ year time series datasets 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 MSP databases at a time when climate was still a new objective for MSP globally. Could we identify areas with different patterns of thermal stress over time and at a scale relevant to the MSP zoning designs? In other words, using remote sensing data, identify areas with many anomalous (i.e., very warm) Sea Surface Temperature (SST) months to indicate potentially thermally

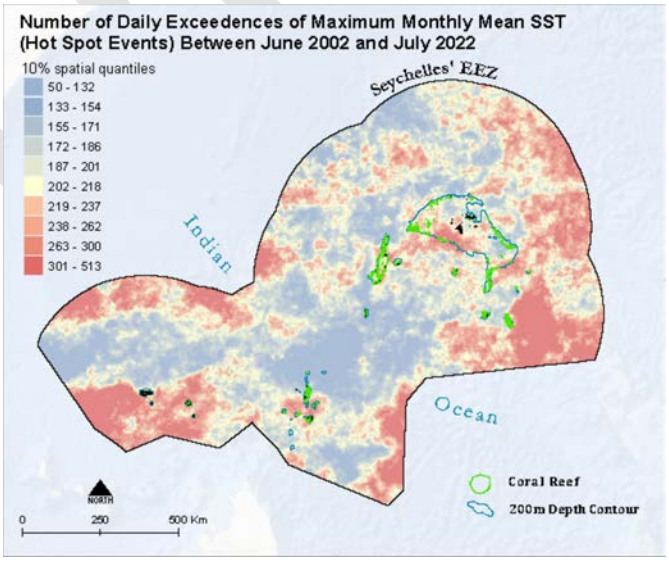
impacted areas; conversely areas with few anomalous SST months might represent thermal refugia for corals.

The primary analysis in this project was a high-resolution data visualization for Sea Surface Temperatures (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 as defined by +1C 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 approx. 1 km spatial resolution from 2002-2019 for the 'heat stress months' and 2008-2019 for the Space Time Cube: both in 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. 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, Assumption, Cosmoledo, Astove) and deep waters in 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 with 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 MSP 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 relies on multiple data sets, some of which are available globally from remotely sensed sources.
- These large datasets require substantial computing power to manage, analyse and visualize in GIS, which is an important consideration for any MSP process.
- Climate smart MSP is growing and, in particular, to look at resilience in a planning context for both biodiversity protection values and socio-economic values and livelihoods.



Marxan

Marxan is a widely used spatial optimization software that was initially developed for conservation planning purposes. Spatial optimization refers to the identification of discrete areas on the map that maximize representation of planning features while minimizing the area required to do so. Said differently, it gives us insight as to where we might get the most "bang-for-the-buck", spatially, in representing fishing effort in a spatial zoning design. Originally designed for conservation planning purposes, Marxan is predominantly used to identify near-optimal spatial configurations for the conservation of biodiversity features, ecosystem services and associated human activities. However, due to its inherent flexibility and robustness in handling large datasets, Marxan has found application in diverse fields beyond conservation planning. Its versatile nature allows for the general exploration and analysis of spatial patterns inherent in large datasets, making it a valuable tool for highlighting areas of interest in various contexts and for generating multiple different outputs for discussion.

In the context of this study, we employed Marxan as a zoning decision support tool to help allocate space in a way that efficiently incorporates preferred areas for these fisheries, i.e. to maximize the representation of fishing effort while minimizing the area required to do so. Our aim was to leverage Marxan to identify areas of significance for these fisheries by analyzing multiple alternative solutions generated 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, allows us to identify important areas for consideration regarding this fishing sector and aligns with the overall intent of developing efficient marine zoning designs. This approach benefits the MSP zoning process by informing the *efficient zonation of space*, which can help reduce the overall impact to the fishing sector and the associated expenses associated with zone management going forward.

Perhaps most importantly, this exercise conducted at the beginning of the MSP 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 MSP team with a more comprehensive understanding of the patterns and dynamics of fishing activity, which directly informed the development of zoning designs.

Fisheries Analyses

At the outset of the MSP process in 2014 the Seychelles Fishing Authority provided the MSP 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 3 equal areas representing the top, middle, and bottom thirds based on the average total catch over the ten-year period reflected in the data. 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 Fishing Authority, specifically representing distinct tuna fishing locations between 2012 and 2016. This new dataset 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 observed in the industrial tuna fleets, and they provided new insights by including fishing location and catch data from the previously unavailable semi-industrial longline fleet. This expanded dataset enabled us to more effectively map and analyze the spatial and temporal variability of tuna catch across Seychelles' Exclusive Economic Zone (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 inter-annual 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 50km 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 50km 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, 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, shedding light on the stability and variability of catch patterns across different locations within Seychelles' EEZ, between 2012 to 2016. The resulting maps developed by the MSP core team informed the MSP 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.

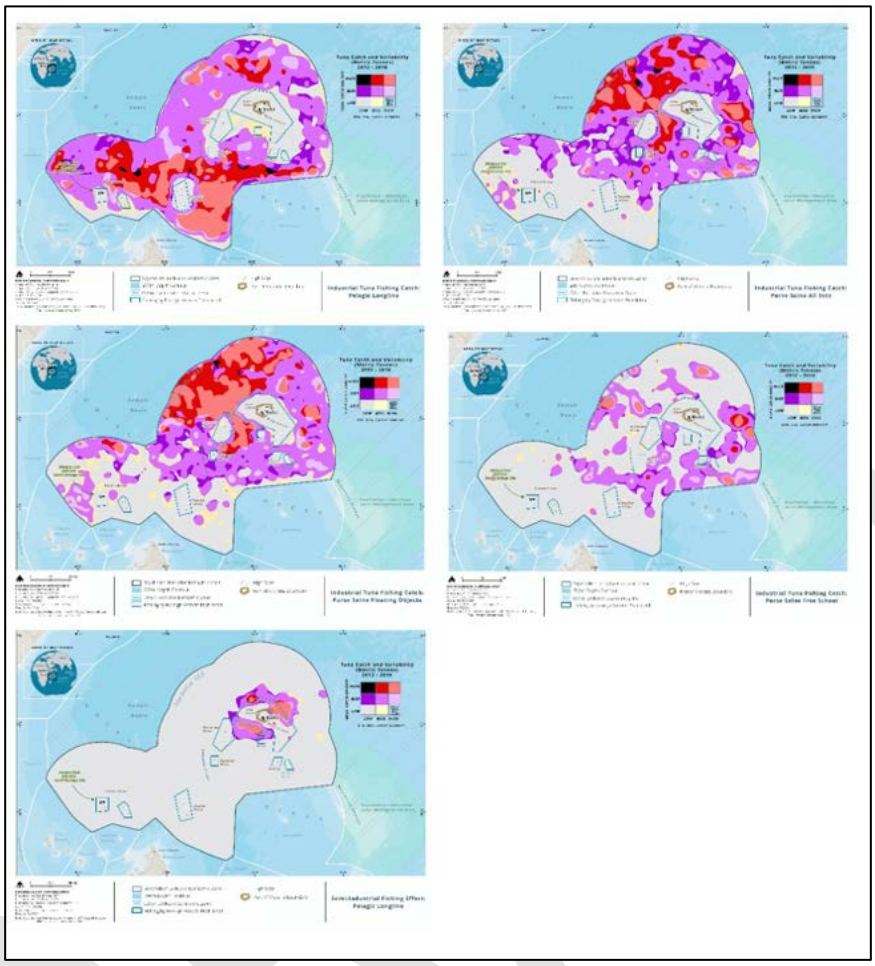


Figure [-]. Fisheries analysis for temporal and spatial patterns for the industrial purse seine, industrial longline and sem-industrial longline fisheries in Seychelles.

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 has adopted the precautionary principle and is making management decisions that are conservative for the water surrounding Seychelles. This approach is 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 is 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 objective for new marine protections in deep water will be different than in shallow waters because the biodiversity is different, the sensitivity to human disturbance is different, and the status and condition is 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, it also supports coastal protection functions such as during high winds and tides. In deep water, there are many benthic features that only occur at these depths including 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 populations that they can be seeded by currents and replenished (e.g., Andrello et al. 2016).

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 has started to develop criteria for improving sustainability of fisheries in Seychelles' waters. The MSP provided an opportunity to advance discussions about 100% monitoring of the fishery. With Seychelles Fisheries Authority a pilot and rolling out of Electronic- Monitoring (EM) project is underway with the industrial longline and purse seine & semi-industrial fishing fleets. In addition, support from TNC's fishpath team is looking at improved fisheries harvest strategies in coastal fisheries including spanner crab and lobster fisheries using tools such as fishpath.

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 (Seychelles Statistical Bureau 2013). The MSP Zoning covers all the marine waters (including species, habitats and ecological processes

that support marine life) of the Seychelles EEZ, from 0-200 nautical miles, approximately, though the actual distance may be longer in some parts of the EEZ.

In Phase 1, the MSP zones were coarse scale, and are focused on the offshore waters, beyond the Territorial Sea (12 nautical miles from the high-water mark). In Phase 2, new areas were added, and Phase 1 areas were expanded. Throughout the zoning design process, consultation and input by all stakeholders is received as per the Seychelles MSP 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 inner islands Port Fee Boundary Area (zone 3).

Detailed zone methodology will be available in a Supplemental Document.

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 them and, where possible, to address or incorporate these into the zoning design process and proposals.

- Integrate existing zones and/or management plans including the current marine protected areas and fisheries management zones ore boundaries.
- Technical, legal and political complexities of 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 (Eagle et al., 2008; Edwards 2008).
- Capacity to implement zones.

Zoning Design Considerations

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

- Harmonise and integrate the zones designated or proposed under the existing and revised Fisheries Acts 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 the gaps in marine data, but do not be stalled by these
- 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 overlapping of uses can be achieved through effective stakeholder consultation that draws on inputs from the proposed Technical Working Groups.
- Evaluate the benefits of no take areas and fishery closures as management tools.

Zoning Process

A zoning process was proposed and discussed in 2014-2015 and included both spatial and non-spatial components and consists of multiple steps. Geographic boundaries of zones will be captured and the non-spatial management directions for uses and activities within the zone will be developed. While the zoning process steps listed below appear sequential, it was an iterative process because the steps do not always progress linearly. For example, several steps may be completed simultaneously, some steps may be only partly completed because information is missing or not available at a certain time, and steps can be repeated or revisited as new information becomes available or provided.

1. Review existing plans, literature, 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 zoning scale and scope.
6. Draft zoning objectives
7. Decide upon 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, stakeholder and public.
13. Assess, review and adjust zones and management directions

Information for specific steps:

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

One of the first steps in the zoning methodology was to inventory and map existing zone, boundaries or areas, and determine their locations, size, objectives, management plans, regulations, and any other information pertaining to these existing areas. 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 3.1 – Existing zones 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, first designated in 1973 Ste Anne Existing zones 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
- Voluntary exclusion zone, PetroSeychelles

The information about existing zones, boundaries and areas is important because it informs the zoning design in terms of meeting the marine protected 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 these existing areas. The inventory also helps to understand what percentage of Seychelles' waters are currently under management and/or have restrictions for certain activities. For example, the Fishing by Foreign Vessel areas comprise 119,860 square kilometers or almost 9 percent of the EEZ and Territorial Sea. And, using the estimated boundary of the Territorial Sea, it can be determined that nearly 40% of these foreign fishing prohibited zones lay within the Territorial Sea (Table 3.2).

Table [-] The Territorial Sea within the zones where foreign fishing vessels are prohibited.

Zone #	Fishing by Foreign Vessels is prohibited	Territorial Sea Km^2	Percent of EEZ
1	Around Mahe Island and Seychelles Bank	12,807	0.9
2	Around Platte Island	1,619	0.1
3	Around Coetivy Island	2,007	0.2

Zone #	Fishing by Foreign Vessels is prohibited	Territorial Sea Km²	Percent of EEZ
5	Around the Amirantes Islands	11,897	0.9
6	Around Alphonse Island	2,403	0.2
7	Around the Islands of Providence, Farquhar and St Pier, and Wizard Reef	7,113	0.5
8	Around Cosmoledo and Astove Islands	4,322	0.3
9	Around Aldabra and Assomption Islands	5,262	0.4
	TOTAL	**47,431**	**3.5**

#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. Advice from the GBR and also from Canada's Marine Plan Partnership (MaPP) was to consider a zoning framework that had 3-5 zone categories.

#3 - Gather and review data layers for the planning boundary

See Supplemental document for GIS methodology.

#4 – Zoning Process

See Supplemental document for GIS methodology.

#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 was delineated from the high water mark at the shoreline to the limits of Seychelles Exclusive Economic Zone (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.

#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.
- Identifying 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.

#7 - Zoning approach

- Straight lines
- No vertical zoning
- Coordinates using WGS84
- 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 it needs to be for the biodiversity goal.
- Temporal, seasonal and/or rotating zones could be considered during revision of the Plan.

#8 - Clearly articulate criteria for defining the spatial extents of the zones.

#9 – Develop spatial and non-spatial tools to support development of zones

#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, stakeholder and public.

#13 - Assess, review and adjust zones and management directions

ZONING FRAMEWORK

In 2014, five zone categories were proposed to match the themes of the MSP: fisheries, biodiversity conservation, public utilities and infrastructure, non-renewable resources, and tourism & recreation.

Originally, 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., UNPD PA project), and spatial data sets from government agencies, academics, local experts and published papers.

In March 2015, a revised MSP zone framework was developed to simplify the alignment of the zones with the alignment of the MSP planning objectives: biodiversity protection, sustainable economic development, and climate adaptation. The zoning design must also endeavour to maximise economic opportunities for existing and future activities in the remaining EEZ.

The Seychelles Zoning Framework has three zone categories and they address the 30% biodiversity protection goal (Zones 1 and 2), support the development of the sustainable Blue Economy (all Zones) and support marine infrastructure and existing uses (Zones 1, 2 and 3) (Table [-]). For each zone category, an Allowable Activity Table was developed and associated documents. Supporting the Zoning Framework and Allowable Activities development was the General and Area-based Management Considerations and the Master List of Definitions.

1481 **Table [-].** Seychelles MSP zoning framework with zone categories, name, objectives and description (v.4)

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Zone Category	Zone Name	Spatial Objectives	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, and 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.

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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 milestone of the MSP, that is 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 Assumption 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 are being approximated by 12 nautical mile buffer from the high-water mark.
- By 2020, the Interim Zone 2 areas will have 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 will be phased in for activities and uses. The existing agreements and activities will be in place through 2020 so as to phase in increased marine protections and sustainable uses. There are several existing agreements in Seychelles and these are taken in to account in the zoning design, for example, EU-Seychelles Fisheries Partnership Agreement.

In April 2015, a preliminary zoning design was proposed (map 1.1). In June, a second version of a zoning design is proposed with 14 areas (Table [-]). These map areas reflect 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 MSP Initiative used the "preferred" scenario from the UNDP Protected Area Expansion Project final report (Scenario 06, UNDP 2015) and the zoning design was evaluated for capturing the goals for representation established through the PA process (see UNDP 2015). Climate change threats were included in the preferred scenario (Maina 2011) as were some fisheries uses.

Table [-]. Phase 1 – Milestone 1 draft zoning design areas for consultations (version 4.0, November 2017).

Map Area #	DRAFT Area Name	Total Size (km^2)	Percent of EEZ	Draft Zone Category v4.0
1	Mahé Plateau - Central	5,714	0.4	Zone 2
2	Bird and Denis Islands	3,296	0.2	Zone 1
3	*Mahe Plateau - NW*	-	-	*See #6*
4	*Coetivy and Fortune Bank*			*See #6*
5	Mascarene Ridge N	8,650	0.6	Zone 1

Map Area #	DRAFT Area Name	Total Size (km^2)	Percent of EEZ	Draft Zone Category v4.0
6	Amirantes to Fortune Bank	136,169	10.8	Zone 2
7	Amirantes Group	6,669	0.5	Zone 1
8	Alphonse Group	18,950	1.4	Zone 1
9	Central Pelagic	41,700	3.0	Zone 1
10	Farquhar Group	32,488	2.4	Zone 2
11	Aldabra Group East	23,000	1.7	Zone 1
12	Cosmoledo and Astove	5,350	0.4	Zone 2
13	Aldabra Group	74,400	5.4	Zone 1
14	Aldabra North	38,950	2.8	Zone 2
15	WIOMER Upwelling #47	22,250	1.6	Zone 1
16	Coco de Mer Seamounts	17,650	1.3	Zone 1
17	Offshore Waters	903,463	65.7	Zone 3

In June 2015, a revised zoning design was presented (version 2.0) and discussed with stakeholders and government. The MSP process received comments and concerns June – December 2015. Revisions to this design were made resolve 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 MSP Atlas was started to support the zoning design and view spatial activities, 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) (Table 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 UNDP-GEF PCU PA project. The next steps include 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 will include how to proceed in Phase 2 and refine the areas within the Territorial Sea (12 nautical miles from high water mark). Each zoned area will include recommendations for allowable activities and uses, and management considerations for allowable activities. An Activities Table has been drafted for each of the zone categories (Table 4); the Activities Table needs 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 Mar 2017, based on input in 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 Mahe 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 Ministry (MEECC) in Oct/Nov 2017, submitted to Cabinet and underwent a mandatory 28-day public review period. The two new marine protection areas were gazetted on 21 February 2018 by the Honourable Minister Didier Dogley. A signing ceremony took place at the Savoy Hotel with a reception that included the Vice President Meriton, The Nature Conservancy's Maria Damanaki and Robert Weary, as well as other distinguished guests and stakeholders.

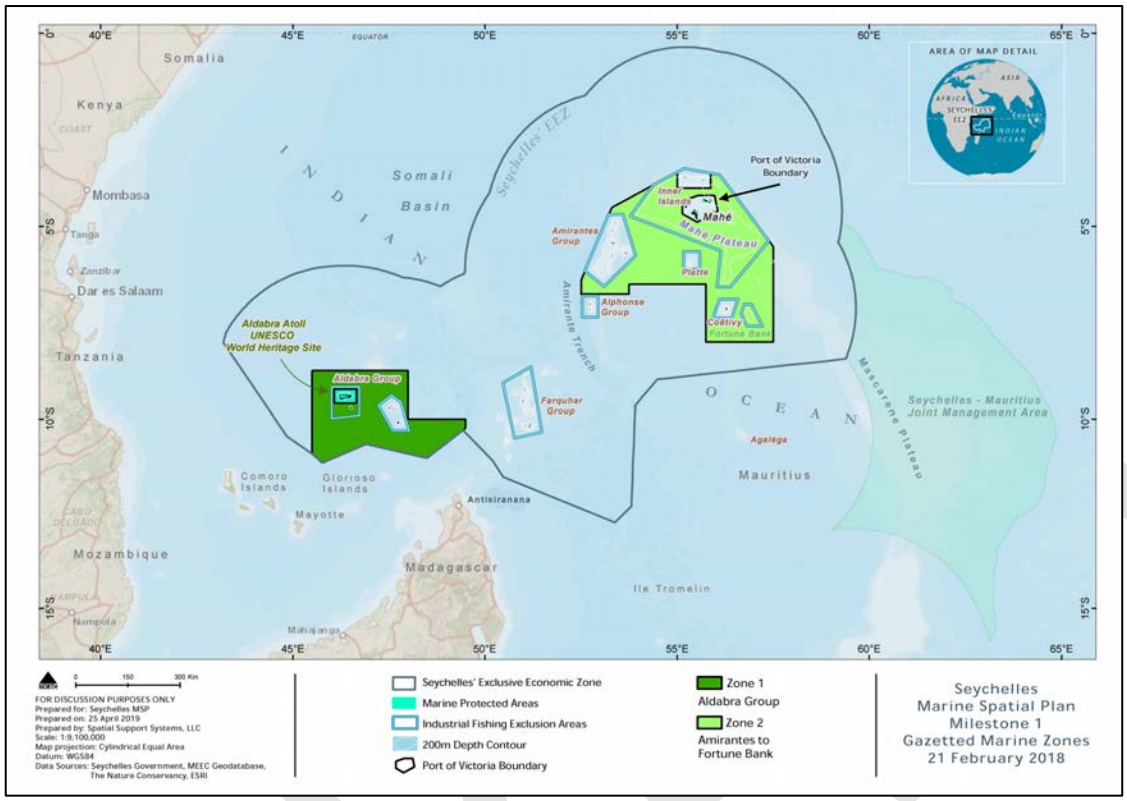

Figure [-]. Milestone 1 reached 15% in marine protection areas and was gazetted on 21 February 2018 (zoning design 4.0).

Phase 2 – Milestone 2

Phase 2 included Milestone 2 and 3 and expanded marine protections from 15% to more than 30%. Phase 2 was different from Phase 1 because the discussions would now include 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 Milestone 2 and 3. Building from zoning design 4.0, additional areas were proposed to meet the next milestone of 22.5% in marine protection.

For Milestone 2, 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 in particular 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 also configured with consideration of the EEZ boundary shape.

For Milestone 2, the 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 Mahe Plateau and the Aldabra Group (which included Assomption). Assomption was gazetted as a Zone 1 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 Jan/Feb 2019, submitted to Cabinet for approval, underwent a mandatory 28-day public review period. The two marine protection areas, expanded from Milestone 1, were gazetted on 15 April 2019 by the Honourable Minister Wallace Cosgrow of the MEECC.

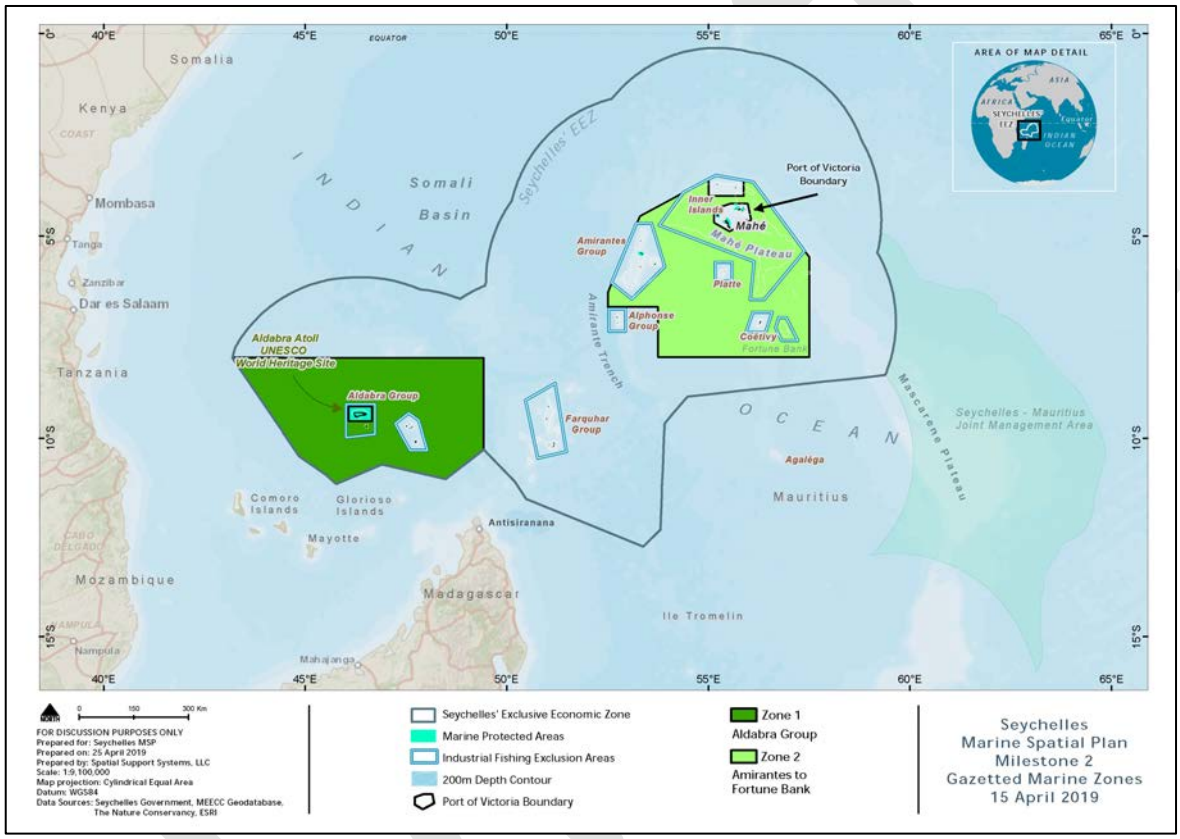

Figure [-]. Milestone 2 reached 26.2% in marine protection areas and was gazetted on 15 April 2019 (zoning design 4.3).

Phase 2 – Milestone 3

The final step in the zoning design, Milestone 3, took place in 2019. Consultations were held to expand protections to 30% from the zoning design in Milestone 2. In this Milestone, the discussions for Zone 3 were fully included and the development of Allowable Activity Tables for this zone. In Milestone 3, all the remaining proposed areas were discussed as well as Assomption Island.

Stakeholder discussions 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 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 Mahe and in the Outer Islands.

The nomination file for Milestone 3 was prepared for the MEECC in Oct/Nov 2019, submitted to Cabinet for approval, 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. The areas were approved and gazetted on 26 March 2020 by the Honourable Minister Wallace Cosgrow. The signing ceremony occurred at State House during the covid-19 global pandemic, with limited attendance.

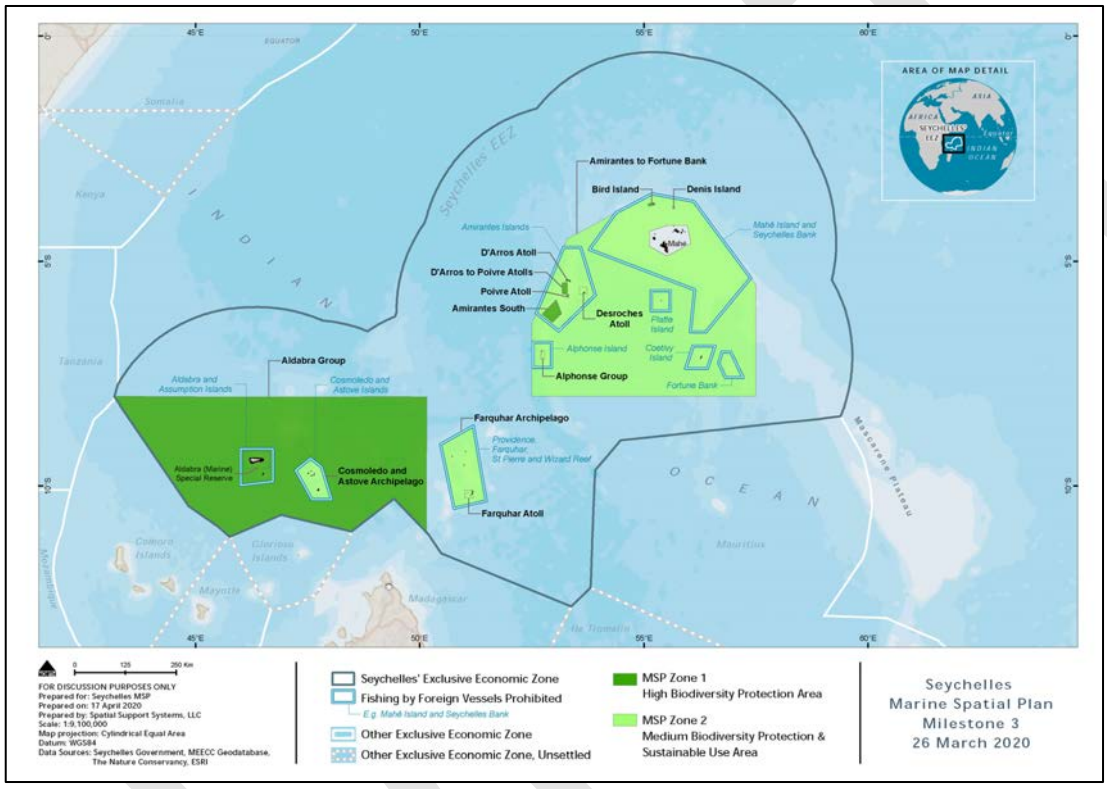

Figure [-]. Milestone 3 reached 32.6% in marine protection areas and was gazetted on 26 March 2020 (zoning design 5.45).

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 to the SMSP process three Areas of Interest. These areas came from the PetroSeychelles Atlas and included the Mahe Plateau, Farquhar Archipelago and north of the Aldabra Group. During the discussion of expanding the Aldabra Group boundary in Milestone 2, the guyot habitat feature, north of Aldabra Group, was identified as a feature for biodiversity

representation. During the consultations, this 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 reduced their overall footprint by [-%].

- The Mahe Plateau drop-off was proposed as Zone 1 areas in the original zoning design. This was to expand protection for the upwelling areas along the Plateau and develop protection areas that crossed from the Plateau to the deep water, as per a design principle that is recommended especially for shelf habitats. The early design for the 30% marine protection goal included the drop-off habitats along the perimeter of the Mahe Plateau. The semi-industrial fishery representatives indicated that they voluntarily do not fish on the Plateau in order to not compete with the artisanal fishing vessels, which have a limited range from Mahe, Praslin and La Digue.
- The industrial longline fishery compromised on their fishing areas and preferred that the fully protected areas for Zone 1 were as consolidated as possible.
- The Coco de Mer seamount ridge was proposed as a Zone 1 area to protect species using the seamount ridge. The ridge is within and outside the Seychelles EEZ. This is an important fishing location for the semi-industrial fishery for target catch of [fish species] and somewhat important for the industrial purse seine fishery.
- The SE corner of the EEZ, the northern tip of the Mascarene Plateau, was proposed as a Zone 1 area for the seagrass beds and connections to the Joint Management Area.
- A pelagic zone was proposed as a Zone 1 area for protection of pelagics and 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 took part in discussions for the Amirantes Group in Milestone 3. There was low support for any Zone 1 protections on the Amirantes but the information was presented on needing to have replication across the 115 island archipelago and that stakeholders explained the high biodiversity values of the Amirantes Group.
- The initial shape of Bird Island centred the island within the protection area. The design was changed in consultation with stakeholders and with inputs from the island owners. A key fishing area to retain for the Blue Economy was Silhouette Bank and the drop-off.

ALLOWABLE ACTIVITY TABLES

The Allowable Activity Tables were approved by the Executive Committee in May 2024. The Codes, Tables, General- and Area-based Management Considerations and Master List of Definitions are final versions. The Master List of Definitions may be updated condition on definition changes from the Fisheries Act or other Acts in Seychelles that are undergoing revisions and approvals.

Allowable Activities Table Codes

The Allowable Activity Table (AAT) Codes for the Zone areas were identified through the SMSP Initiative (2014-2020). 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 2023 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 operation 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 Petro Seychelles 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 high water 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.

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Allowable Activities Table – Zone 1

Allowable Activities Table (AAT) for the Zone 1 areas identified through the SMSP Initiative (2014-2020)

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	*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 (2014-2020)

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	*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 (2014-2020)

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.

1. The General Management Considerations apply to all activities and uses within the boundary of the Seychelles Marine Spatial Plan.
2. The Seychelles Marine Spatial Plan (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 these agreements unless otherwise specified by government for a specific area or zone. Seychelles is a signatory to 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, 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 MSP process. The SMSP marine protection areas will be reviewed during implementation and evaluated and/or adapted, as per the implementation review process. The MSP marine protection zones were approved by 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 financing for a smooth transition from planning to implementation.

13. The Seychelles Marine Spatial Plan will legally come in to effect on [DATE], when the MSP is completed and legally enforceable, and will be a living plan with on-going monitoring and periodic evaluation and revision. All legal activities within Zones 1 and 2 are allowable until the MSP is approved, and enforcement begins on [DATE]

14. In consideration that commercial marine charter operators take reservations three to five years in advance, the relevant allowable activities come into effect on [DATE] 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 [DATE] 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 [DATE]. 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 Convention on International Trade on Endangered Species (CITES); Port State Measures Agreement (PSMA); UN Convention on Biological Diversity (UN CBD); UN Convention for the Law of the Sea (UNCLOS); UN Sustainable Development Goals (UN SDG).

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 zones 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 is in accordance with Seychelles Maritime Safety Authority (SMSA), Seychelles Defense Forces (SDF) 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 [DATE].

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 stakeholder 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 Executive Committee approved the definition for subsistence fishing from the Fisheries and Aquaculture Bill 2023.

24. Code 2: Definitions of subsistence fishing 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 2023). Previous definition of subsistence means where the 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 MSP 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 (Mahe 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: UN FAO Code of Conduct for Responsible Fishing, UN FAO Guidelines for Small-scale Fisheries, and UN FAO Code of Conduct National Plan of Actions (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 Wild Animals and Birds Protection Act, 1961 (WABPA); All Seychelles waters are within the ICRW Indian Ocean Whale Sanctuary; The International Seabed Authority (ISA) 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 Petro Seychelles 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 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, 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 to manage the marine protection area. New development on land for tourism activities is different from essential access for management of marine protection area.

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 Fishing Authority). Vessel owners bear 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

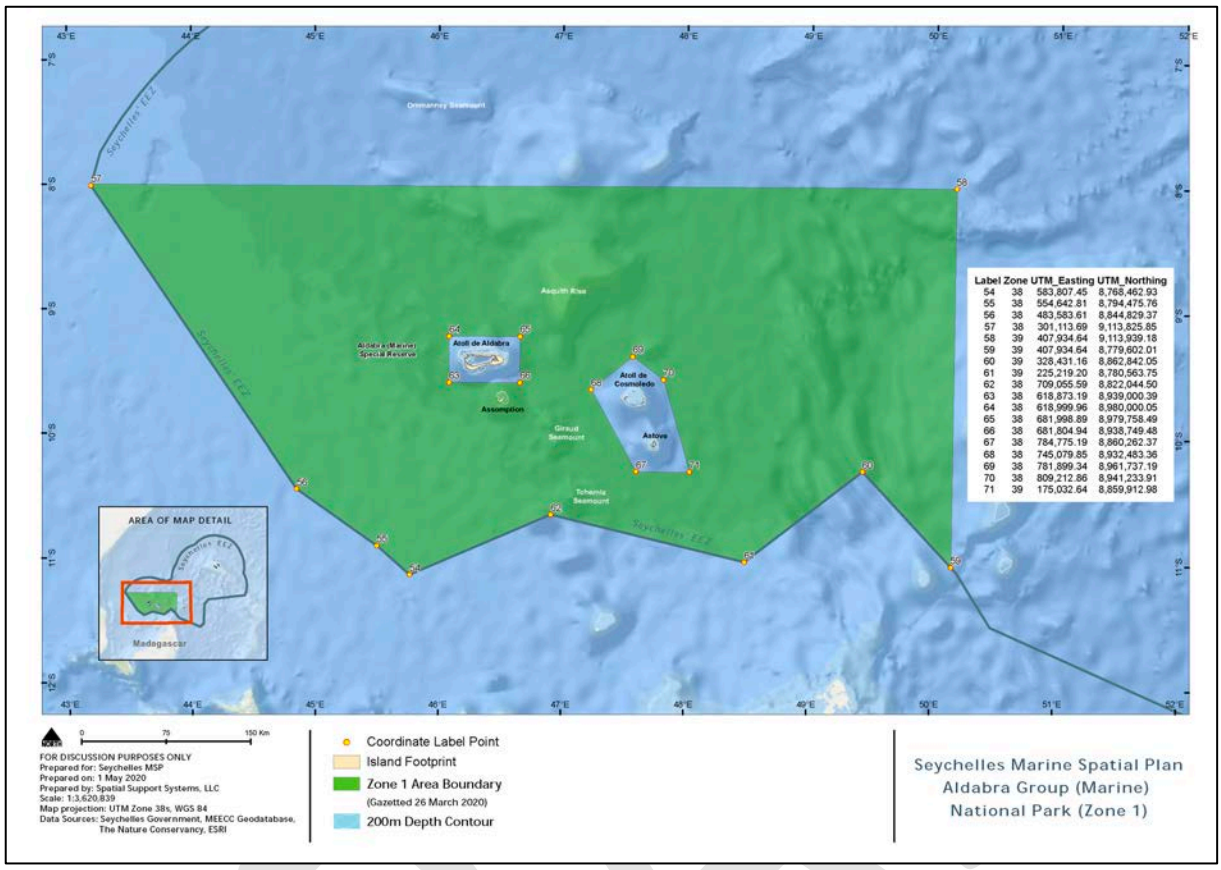
Zone 1: Marine National Parks

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 Nino, 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 (Roberts et al. 2017). The 30% goal was by area and by ecological representation for species and habitats; 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 methodology and framework are summarised in Annex [-].

The objectives for, and management of, new marine protections in deep water will be different than in shallow waters because the biodiversity is different, the sensitivity to human disturbance is different, and the status and condition of the species and habitats are different. In shallow waters, for example, protections for coral reefs not only contributes to the long-term health of these ecosystems and supports fishing and tourism activities, it also supports coastal protection functions such as during high winds and tides. In deep water, there are many benthic features that only occur at these depths 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 are developed using all best available data and information from stakeholders, and are incorporating information on surface currents, archipelagic ecosystems, life history, and gradients of biodiversity so as to include areas identified as priorities for marine biodiversity conservation and avoid overlap with high priority areas for socio-economic activity yet are close enough to source populations that they can be seeded by currents and replenished (e.g., Andrello et al. 2016).

1894 *Aldabra Group Marine National Park*



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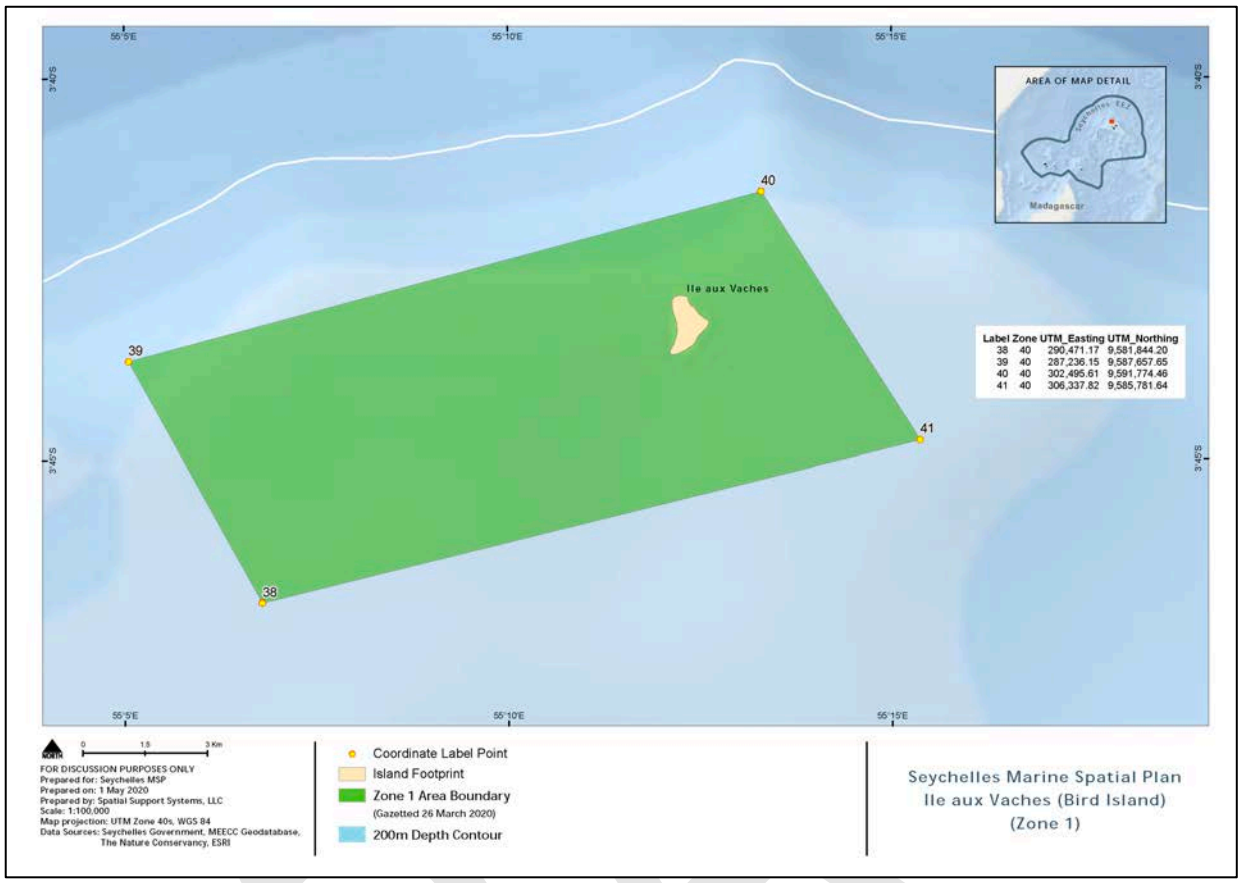
Name: *Aldabra Group (Marine) National Park*		**Size:** 201,235.80 km^2
Milestone: 3	**Zone:** 1	**Percent of EEZ:** 14.89 %
Primary Objective:	To expand high protection status for the waters and seabed surrounding the Aldabra Group and other atolls.	
Geographical Description:	This area is in the south west of Seychelles' EEZ and extends from north of Aldabra Group west to boundary with Tanzania and south to boundary of the EEZ. The eastern boundary of this area is west of Farquhar Archipelago. Note: the EEZ boundary is not finalised in all areas. Coordinates for the EEZ are accurate as of November 2019 and the coordinates of this area always will 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 (International Maritime Organisation, IMO)	
Ecological Description:	This area contains shallow, pelagic and deep sea habitats surrounding Aldabra Group including "Giraud" and "Tchernia" seamounts, canyons, slope, 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. Foraging habitat of frigatebirds and	

	humpback whale breeding habitat. The area includes a portion of 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 (Friedlander *et al.* 2017). 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:	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 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 and hills and deep sea mountains cover 33%, 22% and 11% respectively. Only remaining location with *Dugong dugong* in Seychelles. Migration route for calving Southern Ocean humpback whales, *Megaptera novaeangliae (*Appoo *et al.* 2019).
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 via Assomption Island, where there is an airstrip. Since the 1970s, the waters 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 is conducted by Seychelles Island Foundation. Radar stations to monitor vessel traffic are on Assomption and Astove.
Possible New Future Uses:	In 2017, a proposal was being developed for a "Particularly Sensitive Sea Area" (PSSA) for the waters surrounding Aldabra Atoll. This is currently on hold until new capacity to lead the file. IDC has a development plan (2018-2023) that includes potential future tourism on Assomption.
Comments:	Aldabra Group (Marine) National Park was designated in Milestone 1. The area was expanded and re-designated in Milestone 2. The area is proposed for expansion in Milestone 3 and re-designation.

1897

1898 *Bird Island Marine National Park*



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Name: *Bird Island (Ile aux Vaches) (Marine) National Park*		**Size (square kilometres):** 106 km^2
Milestone: 3	**Zone:** 1	**Percent of EEZ:** 0.008 %
Primary Objective:	To expand high protection status for marine biodiversity to 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 shallow waters to the west and south. It does not include Silhouette Bank.	
Existing Marine Designations:	Foreign Fishing Prohibited Area #1 (Mahé Island & Seychelles Bank): 63,891 km^2 International Shipping "Area to be Avoided" (British Admiralty Charts)	
Ecological Description:	One of only two coralline cays on the Mahé Plateau. High species diversity due to close proximity to the edge of the shallow water shelf of the northern Mahé Plateau. 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 obtained evidence of breeding birds, and young-of-the year birds, traveling north to Coco de Mer as well as well beyond Seychelles EEZ. Bird Island has nesting sea turtles as well as ray species. High biodiversity relative to the size of the area. Bird Island is recognized internationally as a key foraging and nesting area used by 9 seabird species (Skerrett and Disley 2011).	

	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 Nino and 2016-2017 (Graham *et al.2015*).
Summary of Biodiversity Representation:	Contains 34 biodiversity features. Contains 9 of 44 habitat conservation features and 25 of 38 species conservation features: 9 birds, 9 cetaceans, 1 deep water feature, 4 shallow water features, 1 BirdLife IBA, seagrasses, turtle nesting and foraging habitats, and 1 WIOMER site. The WIOMER site covers 100%, seagrasses cover 26% of the area. Frigatebird foraging covers 100%. Area is 99% shallow water continental shelf habitat
Economic Description:	Bird Island is privately owned since 1967 and 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 south and west of Bird Island. Silhouette Bank is used by artisanal fishing, beyond the Zone 1 area boundary. Petroleum exploration and development voluntarily excludes waters within 5 km of the island. Active and expired licensed blocks are in close proximity to Bird Island to the east. Shipping and transportation are directed to passage between the IMO "Areas to be Avoided" on 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. Also sometimes in other documents as Ile aux Vaches Marine.

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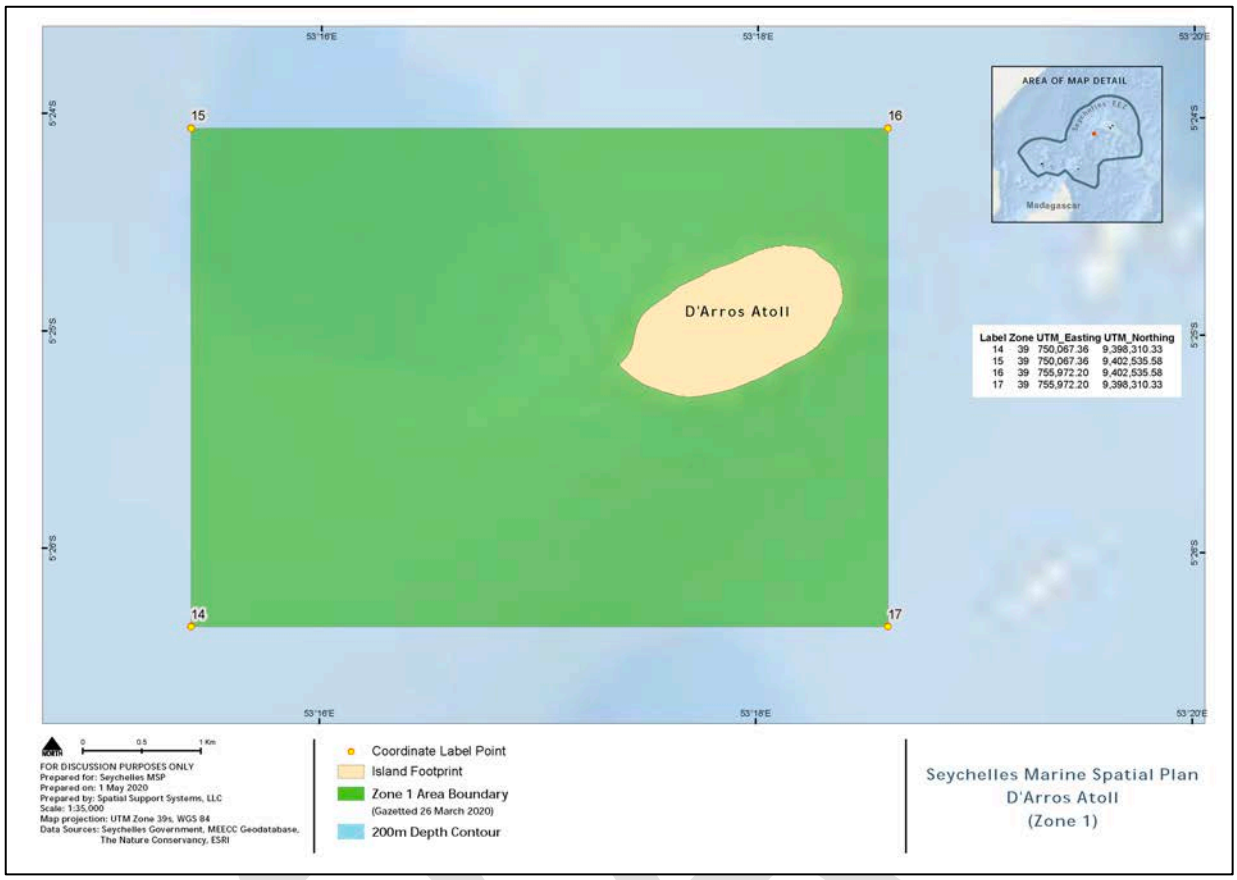
1903 *D'Arros Atoll Marine National Park*



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Name: *Darros 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 Darros.	
Geographical Description:	This area surrounds Darros Island on the Amirantes Bank, west of Desroches and St Joseph. The area is approximately 35 km south of Remire. The boundary avoids a deep water area north of Darros and does not include St Joseph Atoll	
Existing Marine Designations:	Foreign Fishing Prohibited Areas #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 (whales, sharks, seabirds, pelagic fishes). Scientific studies at D'Arros have found ray aggregations with high degree of regularity (SOSF-DRC, 2019). Comprehensive description of the ecology and biodiversity of Darros and surrounding waters can be found in numerous publications including those from the D'Arros Research Centre, that can be accessed via Save Our Seas website. A new species of fish was found at Darros in May 2019, Daly's dwarf goby, *Eviota dalyi (*Greenfield and Gordon 2019)	

Summary of Biodiversity Representation:	Contains 36 biodiversity features. Contains 9 of 44 habitat conservation features and 27 of 38 species conservation features: 9 birds, 11 cetaceans, 7 shallow water, 1 BirdLife Important Bird and Biodiversity Area (IBA), seagrasses, turtle nesting and foraging habitats, 1 WIOMER site. Cetacean distributions overlap 78% of the area. WIOMER covers 100%. Frigatebird foraging covers 99%. High representation of platform reef infilled rim – one third of the 30% conservation goal is found here. Small amount of feature called sand cay with phosphatic sandstone.
Economic Description:	This is a private island since 1975. This area is low importance for artisanal fisheries in the Amirantes Group - 16% overlap with the top 50% of artisanal locations. Tourism, sport-fishing and live-aboard yacht charters occur in waters surrounding atoll St Joseph and D'Arros Atolls. 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 averaged 167 per year (2003-2012) around D'Arros.
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 fishing including fly fishing. Discussions are ongoing with managers of the atoll for input on the proposal. 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 are proposed as Zone 2 in the Amirantes to Fortune Bank boundary. Spelling for this atoll sometimes appears as D'Arros.

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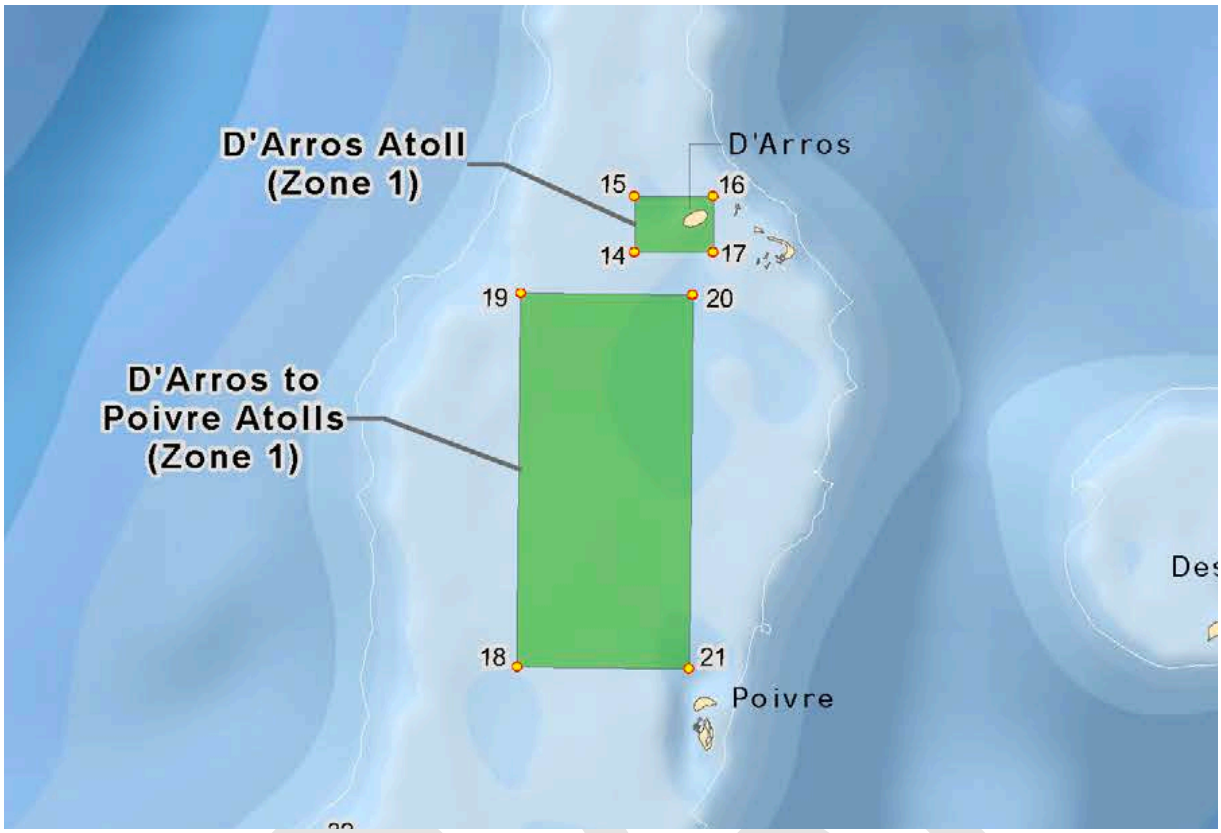
1907 *D'Arros to Poivre Marine National Park*



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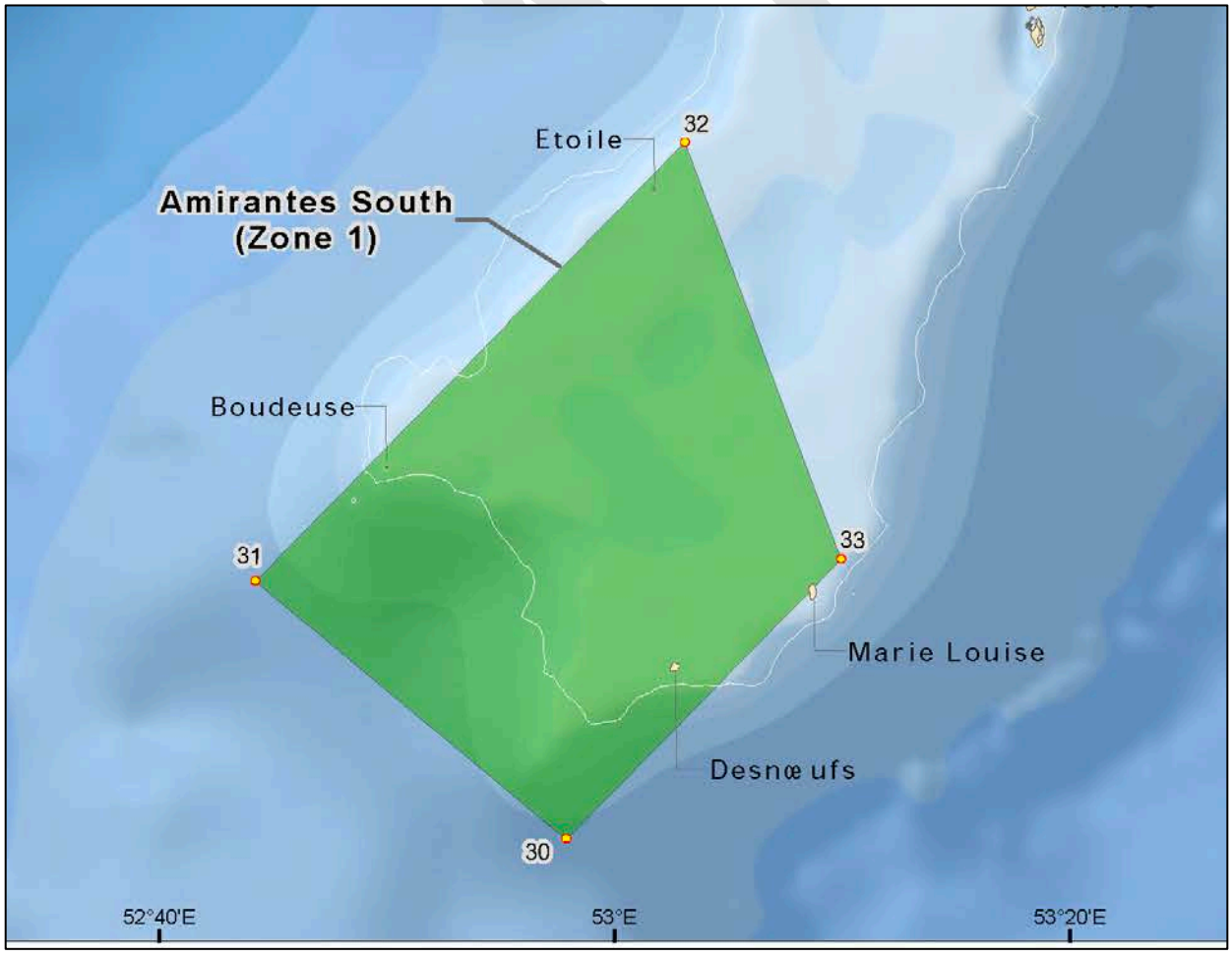
Name: *Darros to Poivre Atolls (Marine) National Park*		**Size:** 370 km^2
Milestone: 3	**Zone:** 1	**Percent of EEZ:** 0.03%
Primary Objective:	To expand marine protection and create ecosystem connectivity within Amirantes for representative habitats and species found on the Amirantes Bank between D'Arros 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, 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:	Contains 35 biodiversity features. Contains 11 of 44 habitat conservation features and 24 of 38 species conservation features: 9 birds, 11 cetaceans, 7 shallow water, 1 BirdLife IBA, seagrasses, turtle foraging habitats, 1 WIOMER site. 100% overlap with all cetaceans except Orca at 54%. WIOMER covers 100%. Seagrasses cover 46%. Frigatebird foraging covers 99%. Medium relief, shelf bank lagoon covers 65%. This area facilitates habitat connectivity along the shallow water shelf (<200m) 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, tourism (yacht charters, diving) use this area. 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



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 Areas #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 (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 (<200m) 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 refuge during ocean warming events.	
Summary of Biodiversity Representation:	Contains 40 biodiversity features. Contains 15 of 43 habitat conservation features and 25 of 38 species conservation features: 7 birds, 11 cetaceans, 3 deep water, 8 shallow water, 1 BirdLife Important Bird and Biodiversity Area (IBA), seagrasses, turtle nesting and foraging habitats, 1 WIOMER site. 88% overlap with all cetaceans. WIOMER covers 100%. Seagrasses cover 76%. Canyons cover 9%. 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, average 557 mean fishing locations per year. Waters surrounding Desnouefs relatively important within the Amirantes for artisanal fishing - 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 underway on Marie-Louise to examine conservation, restoration and enhancement of the ecosystems. Development plans may include small eco-tourism project on Marie-Louise by IDC.	
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.	

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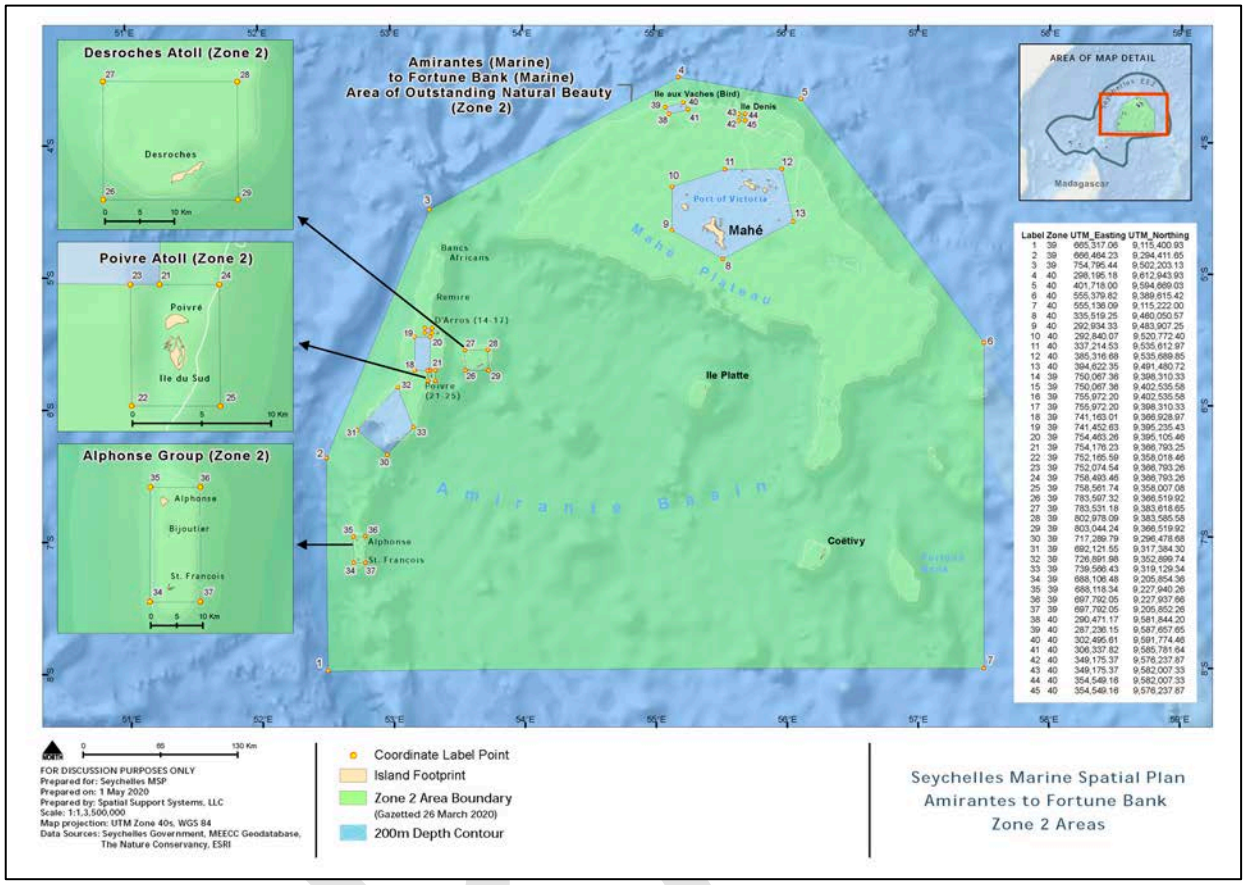
Zone 2: Sustainable Use Areas

Amirantes to Fortune Bank Sustainable Use Area

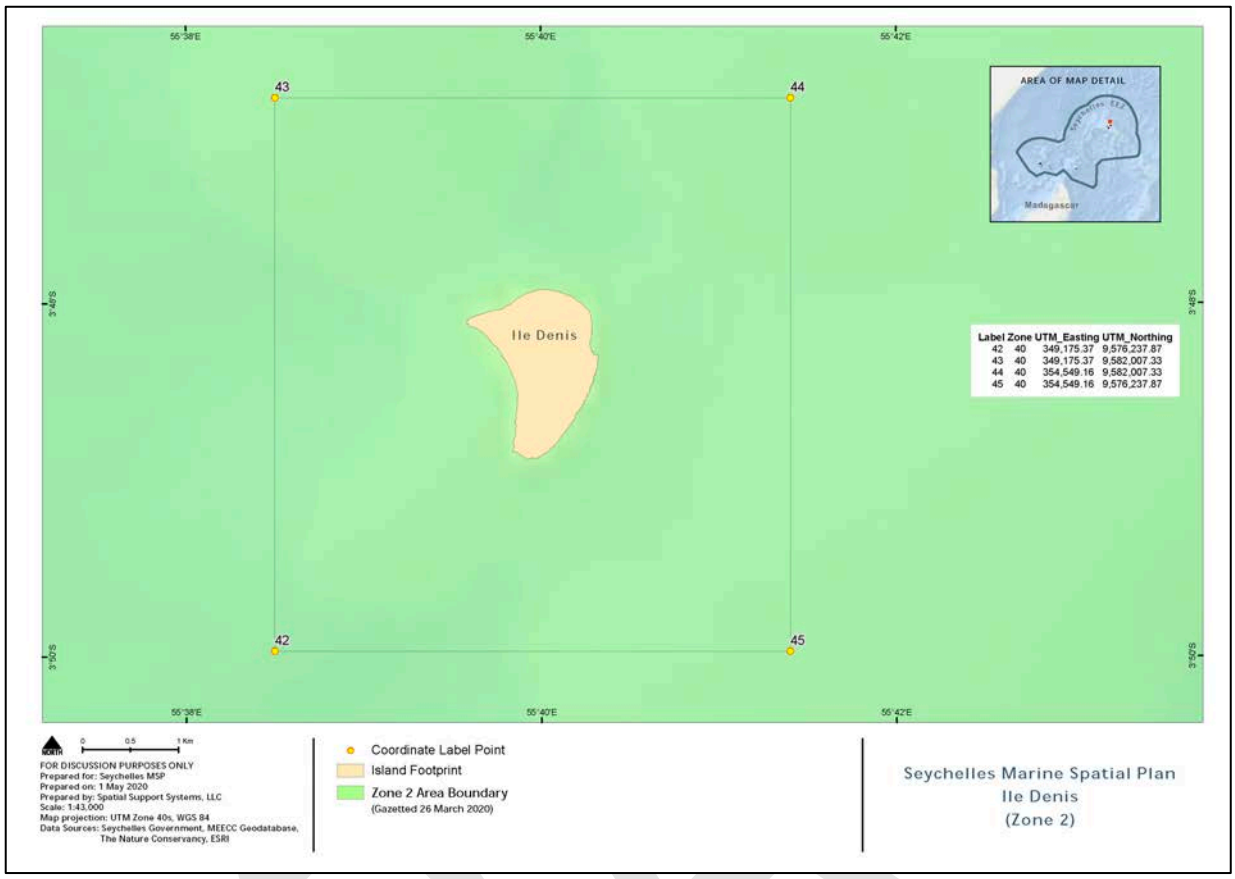


Name: *Amirantes (Marine) to Fortune Bank (Marine) AONB*		**Size:** 217,589 km^2
Milestone: 3	**Zone:** 2	**Percent of EEZ:** 16.1%
Primary Objective:	To expand for protection and sustainable uses. Medium biodiversity protection status for high diversity of habitats and species in deep and shelf waters 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 Areas #1 (Mahé Island and Seychelles Bank): 63,891 km^2 Foreign Fishing Prohibited Areas #2 (Platte Island): 2,377 km^2 Foreign Fishing Prohibited Areas #3 (Coëtivy Island): 2,950 km^2 Foreign Fishing Prohibited Areas #4 (Fortune Bank): 2,406 km^2 Foreign Fishing Prohibited Areas #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 "Fred" seamount and ocean currents develop clockwise (SE) and counter-clockwise (NW) currents during monsoon seasons. The 200 m drop-off and upwelling areas are used by pelagic marine life (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:	Contains 67 biodiversity features. Contains 38 of 44 habitat conservation features and 29 of 38 species conservation features: 9 birds, 12 cetaceans, 15 deep water, 18 shallow water, 1 BirdLife IBA, seagrasses, turtle nesting and foraging habitats, 1 WIOMER site. Cetacean distribution overlaps 100% of area - 11 species. WIOMER covers 46%. Seagrasses cover 7%. High species and habitat biodiversity area with high overlap with pelagic birds and mammals
Economic Description:	Artisanal, semi-industrial longline, industrial purse seine and longline fisheries occur in this area. High value to industrial purse seine and semi-industrial fishing. Marine charters, sport fishing, other marine recreation and tourism including for deep sea fishing and dive tours in shallow waters and drop-off locations within 20 km of 200m depth contour. Commercial shipping traffic passes between Mahé Plateau and African Banks. PetroSeychelles has active and expired licensed blocks as well as applications on Mahé Plateau.
Possible New Future Uses:	Land-based aquaculture has been proposed in some areas of the Amirantes (Seychelles Fishing Authority).
Comments	This area was gazetted in Milestone 1, expanded and re-designated in Milestone 2. Expanded and proposed to re-designate in Milestone 3.

1924

Denis Island Sustainable Use Area



Name: *Denis Island (Marine) AONB*		**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 Areas #1 (Mahé Island & Seychelles Bank): 63,891 km^2 International Shipping "Area to be Avoided" (British Admiralty Charts)	
Ecological Description:	Denis is adjacent to productive upwelling and marine ecosystems for seabirds, sea turtles, sharks, 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 has been identified in this area and frigatebird foraging habitat. Seagrass, coral communities and sandflats in shallow habitats. Denis Island is a breeding location for green and hawksbill turtles as well as at 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, seamount and slope habitats.	

Summary of Biodiversity Representation:	Contains 29 biodiversity features. Contains 7 of 44 habitat conservation features and 22 of 38 species conservation features: 7 seabirds, 8 cetaceans, 3 shallow water, 1 BirdLife IBA, seagrasses, turtle nesting and foraging habitats, and 1 WIOMER site. WIOMER covers 100%. Seagrasses cover 38%. Frigatebird foraging covers 100%. Area is 95% shelf habitat. High importance for representation of continental platform sand reef and turtle nesting areas. 100% overlap with BirdLife IBA.
Economic Description	Privately owned, Denis Island has a holiday resort offering luxury accommodations for tourists. Denis Island is also managed for conservation. Sport fishing 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 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 pending for management or co-management of 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. SeyCCAT funded project underway in 2019 for improving sustainability of artisanal fishing around Denis Island. Synergy with GoS-UNDP-GEF PA Project which identified the area as a proposed sustainable use area and had a nomination file prepared.

1928

1929 *Desroches Atoll Sustainable Use Area*

1930

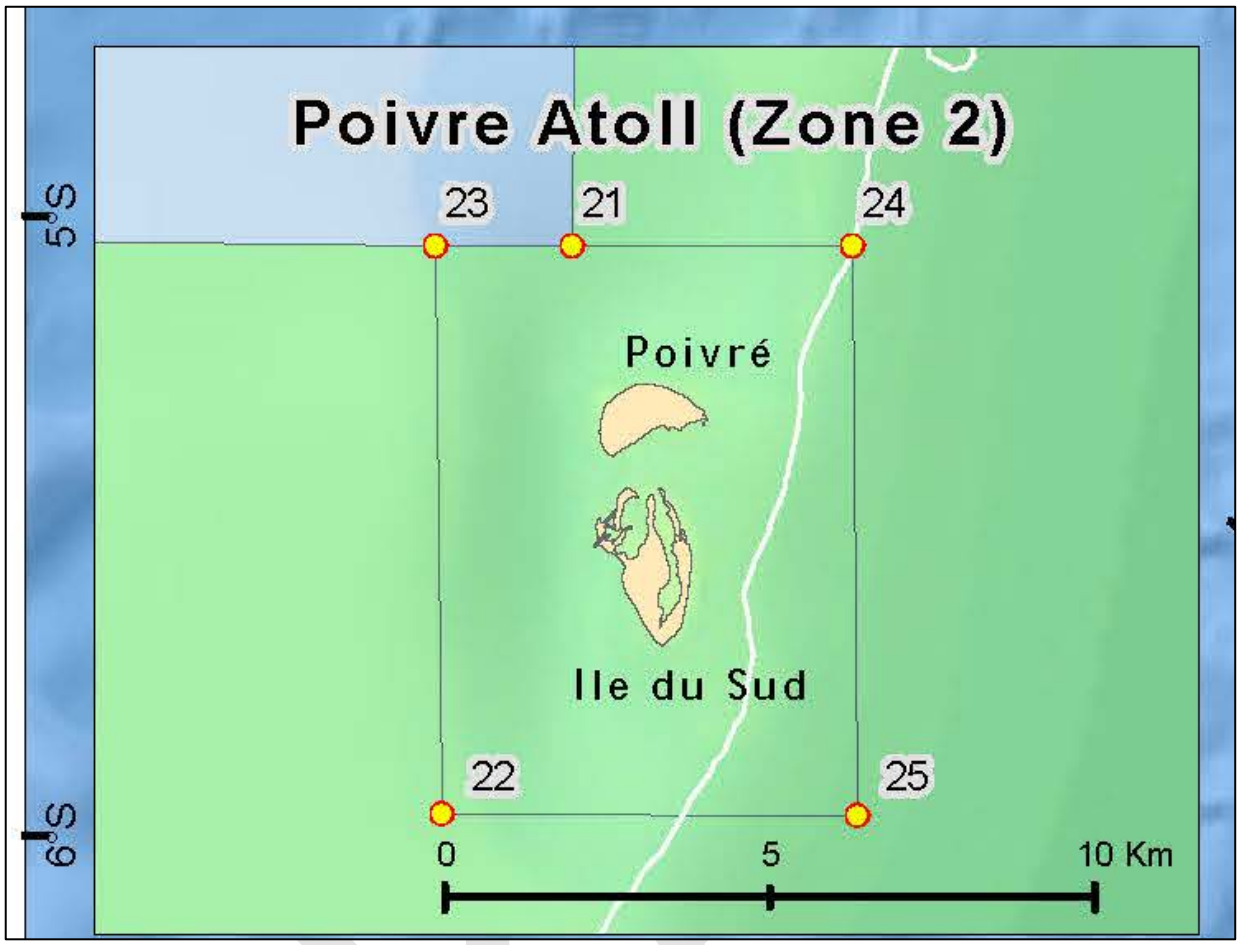
1931

Name: *Desroches Atoll (Marine) AONB*		***Size:*** *333 km²*
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 Areas #5 (Amirantes) 17,285 km²	
Ecological Description:	Shallow and deep-water marine habitats include plateau, 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* , Lemon Sharks *Negaprion brevirostris* and stingrays are common in the lagoon, and Reef Manta Rays *Mobula alfredi* occurr. Seagrass beds are regionally important foraging grounds for Green turtles *Chelonia mydas* and Hawksbill Turtles *Eretmochelys imbricate*. The seaward wall features a complex of tunnels and overhangs supporting high numbers of lobsters *Panulirus spp.,* schools of emperors, snappers and sweetlips and 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* and 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 Important Bird and Biodiversity Area (IBA) criteria.
Biodiversity Representation:	Contains 35 biodiversity features. Contains 11 of 44 habitat conservation features and 24 of 38 species conservation features: 6 birds, 11 cetaceans, 2 deep water, 6 shallow water, 1 BirdLife IBA, seagrasses, turtle nesting and foraging habitats, 1 WIOMER site. 97% overlap with all cetaceans. WIOMER covers 100%. Seagrasses cover 21%. 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 sport fishing including fly-fishing for Bonefish *Albula vulpes* in the lagoon and blue water sport fishing for pelagic species. Diving and snorkelling are popular. Demersal fishing vessels licensed by Seychelles Fishing Authority (SFA), fish on the atoll reef and sea-cucumber fishing occurs here. 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, and a land-based pearl hatchery at Desroches Island and sea cucumber ranching within the lagoon were considered by SFA to be feasible.
Comments:	GOS-UNDP-GEF Outer Islands Project 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.

1932

1933 *Poivre Atoll Sustainable Use Area*



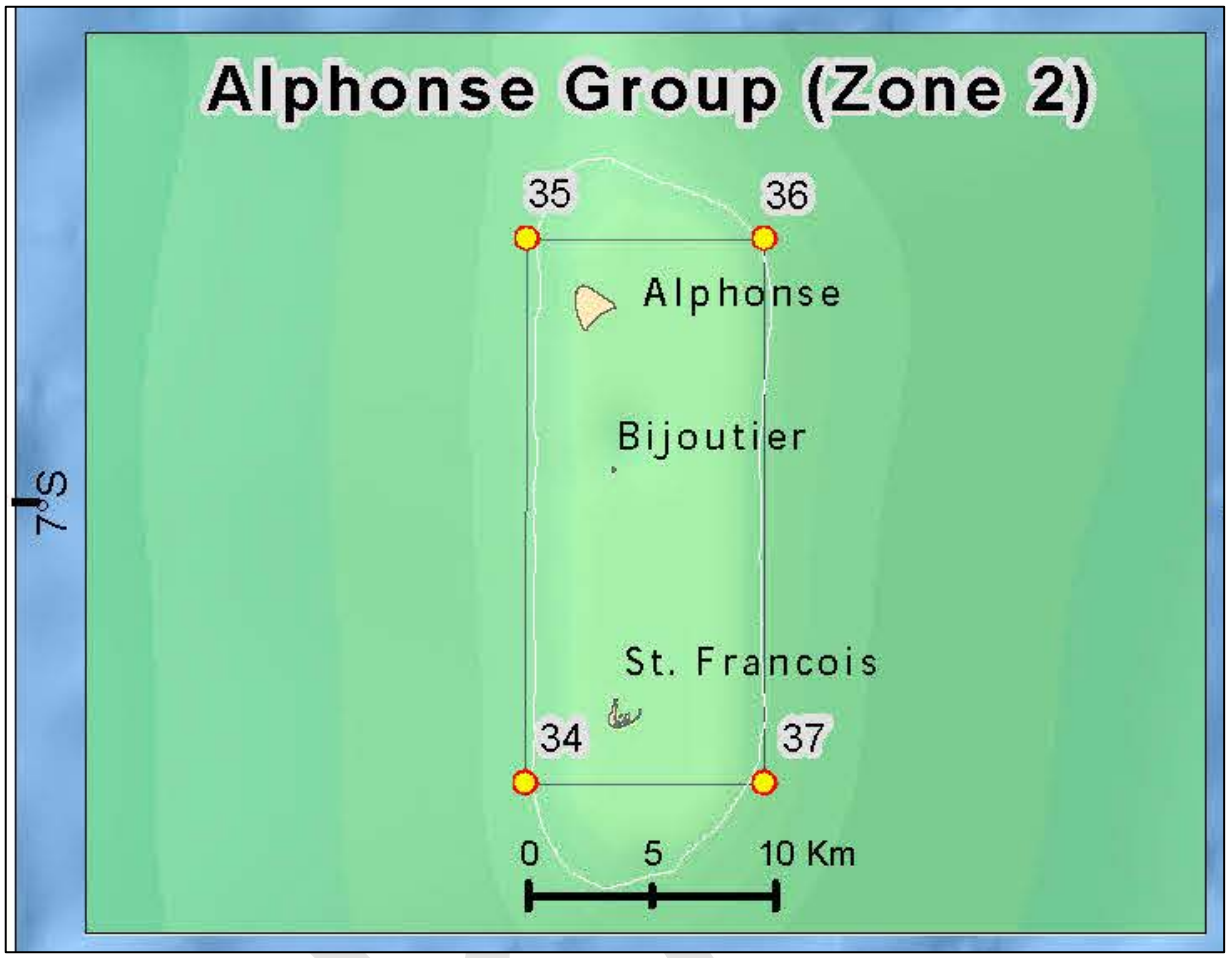
1934

1935

Name: *Poivre Atoll (Marine) AONB*		**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 Banks. The area boundary was developed by the GOS-UNDP-GEF Outer Island Project, and 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 MHWM.	
Existing Marine Designations:	Foreign Fishing Prohibited Areas #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 cilliatum* and *Thalassia hemprichii* with small amounts of *Cymodocea rotundata,* are an important foraging ground for Green *Chelonia mydas* and Hawksbill *Eretmochelys imbricate* 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* occasionally. Live hard coral cover at Poivre was estimated by ICS at 38% in 2017 (*Porites, Acropora* and *Pocillopora*).
Summary of Biodiversity Representation:	Contains 37 biodiversity features. Contains 13 of 44 habitat conservation features and 24 of 38 species conservation features: 6 birds, 11 cetaceans, 1 deep water, 7 shallow water, 1 BirdLife IBA, seagrasses, turtle nesting and foraging habitats, 1 WIOMER site. 80% overlap with all cetaceans. WIOMER covers 100%. Seagrasses cover 63%. A small amount of mangrove habitat is found in this Area. 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, 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:	GOS-UNDP-GEF Outer Islands Project 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.

1936 *Alphonse Group Sustainable Use Area*



1937

1938

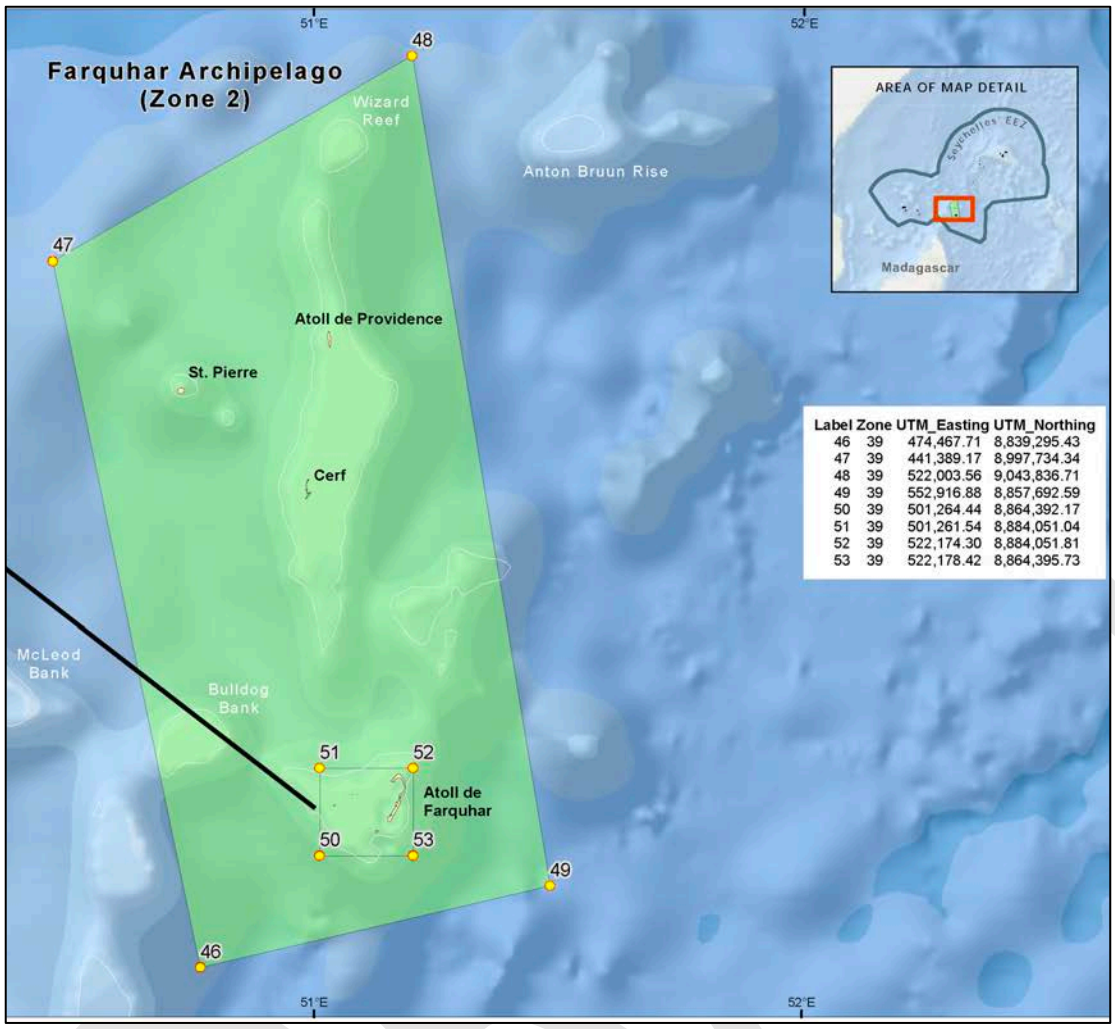
Name: *Alphonse Group (Marine) AONB*		***Size:*** *215 km²*
Milestone: 3	**Zone:** 2	**Percent of EEZ:** 0.02 %
Primary Objective:	To protect the Alphonse and neighbouring St François atolls' lagoons', reefs' and surrounding waters for the protection and conservation of marine habitats and biodiversity and to provide economic opportunities for their sustainable use.	
Geographical Description:	This area is located primarily on the shallow water shelf (<200m) of the Alphonse Group. The boundary was defined by the GOS-UNDP-GEF Outer Islands Project and is a 21.9 x 9.5 km rectangle encompassing both Alphonse and St François Atolls. It includes all areas below the mean-high-water-mark (MHWM) 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 Areas #5 (Alphonse): 2,799 km²	
Ecological Description:	The marine habitats of Alphonse and St François atolls harbour a rich biodiversity. The large, reef-rimmed lagoons harbour 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. Francois 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 Important Bird and Biodiversity Area (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 of the Giant Triggerfish *Balistoides viridesescens* at 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* occasionally.
Summary of Biodiversity Representation:	Contains 34 biodiversity features. Contains 10 of 44 habitat conservation features and 24 of 38 species conservation features: 6 birds, 10 cetaceans, 1 deep water, 4 shallow water, 1 BirdLife IBA seagrasses, turtle nesting and foraging habitats, 1 WIOMER site. 94% overlap with all cetaceans except orca. WIOMER covers 100%. Seagrasses cover 20%. Frigatebird foraging covers 100%. 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 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. Cruise-ships, charter vessels and private yachts visit occasionally by arrangement with IDC
Possible New Future Uses	None identified in 2019.
Comments:	GOS-UNDP-GEF Outer Islands Project 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.

1939

1940

1941 *Farquhar Archipelago Sustainable Use Area*



1942

1943

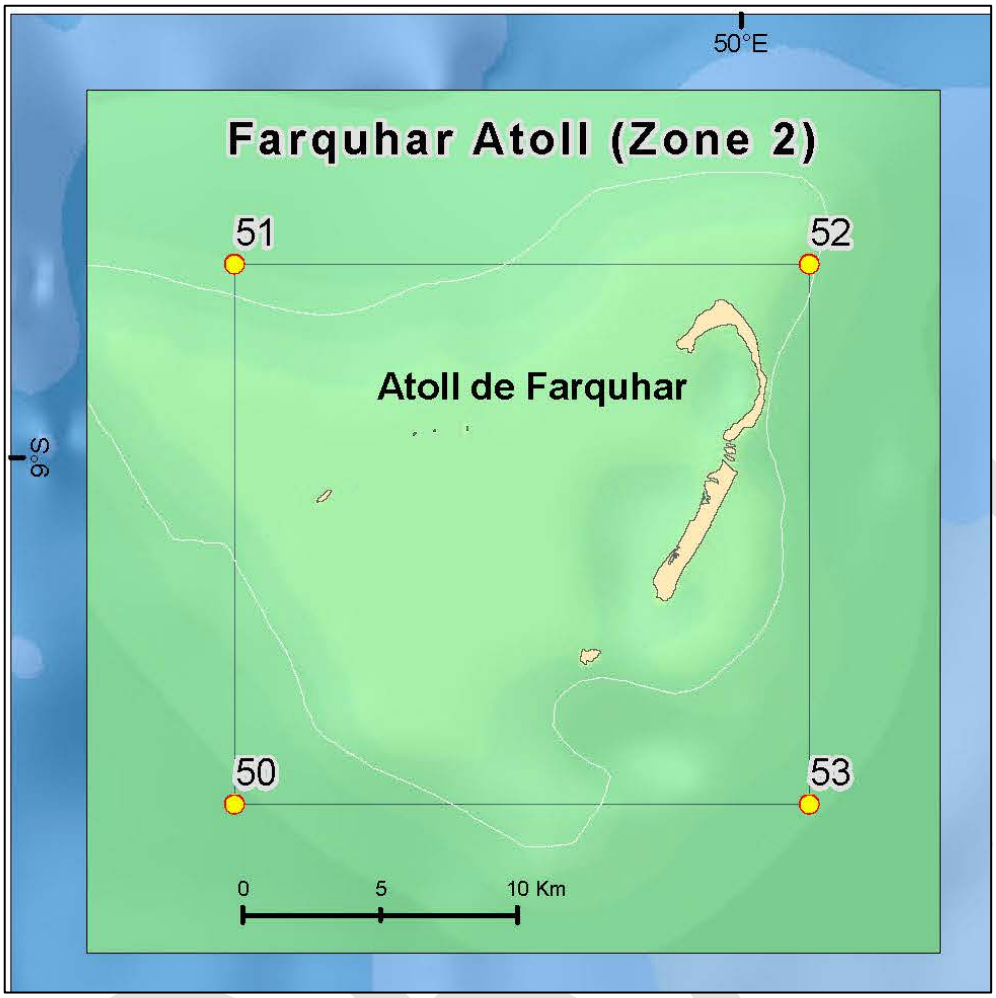
Name: *Farquhar Archipelago (Marine) AONB*		**Size:** 14,482 km^2
Milestone: 3	**Zone:** 2	**Percent of EEZ:** 1.07 %
Primary Objective:	To expand marine protection for representative habitats and species in the Farquhar Group.	
Geographical Description:	This area corresponds to the Providence, Farquhar 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 Areas #7 (Providence, Farquhar and 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. In deep waters, it includes canyons, seamount and mountains; complex benthic topography in areas surrounding Farquhar and includes 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:	Contains 47 biodiversity features. Contains 19 of 44 habitat conservation features and 28 of 38 species conservation features: 8 birds, 13 cetaceans, 9 deep water, 6 shallow water, 1 BirdLife Important Bird and Biodiversity Area (IBA), seagrasses, turtle nesting and foraging habitats, 1 WIOMER site. 100% overlap with all cetaceans except Sei whale at 52% and Risso's dolphin at 99%. WIOMER covers 90%. Seagrasses cover 2%. Frigatebird foraging covers 8%. Continental slope covers 78%, Canyons cover 18%, abyssal depths 12%. The area contains 42% of atoll sea level rim and 23% of atoll sea-level lagoon in Seychelles is found here.
Economic description:	Artisanal fishing, sport-fishing, fly-fishing, petroleum exploration and development, tourism (yacht charters, diving). May be an important area as "safe harbour" for artisanal fishing in Outer Islands. Tourism at Farquhar, Providence and Cerf islands. Tourism accommodation and radar station on Farquhar was destroyed by cyclone and rebuilt.
Possible New Future Uses	Limited seismic surveys in this area and there is some interest in future surveys or exploration. Future geological scientific research proposed by PetroSeychelles for regional seismic surveys with Madagascar.
Comments:	Very high support for Farquhar in a Zone 2 to support both conservation and sustainable uses in this area.

1944

1945

1946 *Farquhar Atoll Sustainable Use Area*



1947

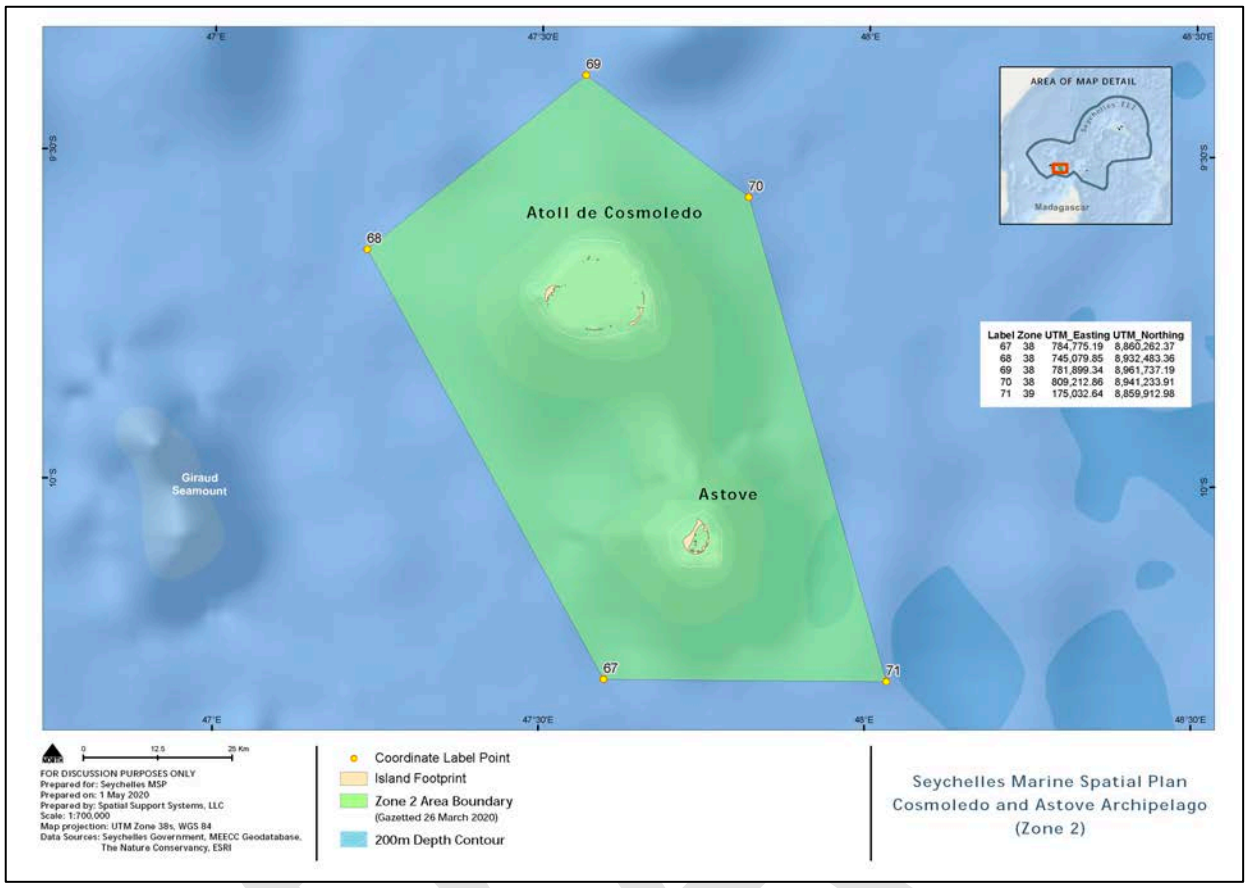
1948

Name: *Farquhar Atoll (Marine) AONB*		**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 MHWM. The boundary includes Farquhar Atoll and Sand Cay, and is approximately 90 km south of Providence, Cerf, and St Pierre.	
Existing Marine Designations:	Foreign Fishing Prohibited Areas #7 (Providence, Farquhar and 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) (BirdLife International, 2019). Extensive seagrass beds and shallow-water coral stands	

	support high densities of crustaceans, molluscs, other invertebrates and fish. The slow-growing encrusting corals (*Porites* and *Montipora)* predominate and are considered relatively resilient to bleaching events. Pelagic fish species include flying fish, tuna and billfish. Larger 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* (Russell 2004) and Bumphead Parrotfish *Bolbometopon muricatum*, both IUCN threatened species (Chan *et al.* 2012) 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:	Contains 38 biodiversity features. Contains 11 of 44 habitat conservation features and 27 of 38 species conservation features: 7 birds, 13 cetaceans, 2 deep water, 4 shallow water, 1 BirdLife IBA, seagrasses, turtle nesting and foraging habitats, 1 WIOMER site. 92% overlap with all cetaceans. WIOMER covers 100%. Seagrasses cover 25%. Atoll sea-level lagoon covers 25%. 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 Permit *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 vessels licensed by SFA fish for snapper, emperors, groupers and sea cucumbers around the atoll reefs. Survey vessels would not operate within 5 km of the atoll's coast; the proposed MPA boundary is 7.8 km from reef at its furthest point. Radar station in repair following damage from cyclone.
Possible New Future Uses	Limited seismic surveys in this area; interest in future surveys or petroleum exploration. This is an Area of Interest for PetroSeychelles. SFA may require access for removal of 6-8 brood groupers per season from spawning aggregations for private-enterprise fin-fish farming in the Inner Islands.
Comments:	GOS-UNDP-GEF Outer Islands Project 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.

1949

Cosmoledo and Astove Archipelago Sustainable Use Area



Name: *Cosmoledo and Astove Archipelago (Marine) AONB*		**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. 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 breed on Astove. Cosmoledo is the largest seabird colony in Seychelles (Skerrett).	
Summary of Biodiversity Representation:	Contains 40 biodiversity features. Contains 15 of 44 habitat conservation features and 25 of 38 species conservation features: 5 birds, 13 cetaceans, 6 deep water, 4 shallow water, 1 BirdLife IBA, turtle nesting and foraging habitats, 1 WIOMER site. 100%	

	overlap with all cetaceans except Orca at 95%. WIOMER covers 100%. Canyons cover 7%, continental slope covers 92% and abyssal features cover 22%. Identified as a blue whale breeding area and as a historical humpback whale breeding area. This is a grouper spawning area. A small amount of mangrove habitat is 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 in the IDC Development Plan (2018-2023).
Comments:	Waters surrounding Astove were explored during the Nekton Expedition, 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.

1953

1954 Table [-]. Summary of the Seychelles MSP Zoning Design and the areas gazetted for Milestones 1-3 for a
1955 30% biodiversity protection goal and sustainable economic uses for the entire 1.35 million km2.

Milestone	Marine Protection Area Names	Total Size (km^2)	% EEZ
1	Aldabra Group Amirantes to Fortune Bank Total Milestone 1	71,601 136,753 208,354	5.3 % 10.1 % 15.4%
2	Aldabra Group Amirantes to Fortune Bank Total Milestone 2	177,435 173,468 350,903	13.1 12.8 25.9
3	Aldabra Group Bird Island D'Arros D'Arros to Poivre Amirantes South Amirantes to Fortune Bank Denis Island Desroches Atoll Poivre Atoll Alphonse Group Farquhar Archipelago Farquhar Atoll Cosmoledo and Astove Archipelago Total	201,224 105 23.4 370 1,334 217,577 29.6 329 54 213 14,478 408 5,310 441,456	14.88 .008 0.002 0.027. 0.1 16.1 .002 0.024 0.004 0.016 1.07 0.03 0.39 32.65

1956

1957

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

1. Seychelles is counting these spatial areas towards the national commitment of 30% in marine protected areas.
2. 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, baited remove underwater video (BRUV).
3. To conserve high marine ecosystem's structure and function, and 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.
4. 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 in [date].
5. 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.
6. 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.
7. 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.
8. 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 2017). Discussions with PetroSeychelles 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.

9. 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 is not limited to:
    - Compliance with all vessel regulations and identification including Hire Craft license registration.
    - Considerations of IUCN Red-listed species in the CR, EN, V, NT categories and the local information pertaining to the IUCN listings.

Aldabra Group (Marine) National Park

10. Aldabra (Marine) Special Reserve is a separate boundary from the Aldabra Group (Marine) National Park.
11. 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.
12. Assomption, Cosmoledo and Astove are public islands and managed by Islands Development Company Ltd (IDC).
13. Seychelles Island Foundation (SIF) has an approved management plan for Aldabra (SIF 2016) and with updates as per their review process. SIF proposes that MSP zone areas in or around Aldabra Marine Special Reserve follow the conditions in the Aldabra Management Plan (SIF 2016).
14. 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.
15. Area-based management for new marine protections will harmonise with existing and all future management plans developed for this area.
16. Waters surrounding the atolls and islands waters have very high fish biomass compared to other islands in Seychelles' Archipelago (Friedlander et al). Illegal fishing in waters on eastern side of Assomption are a concern. IUU fishing has been noted in waters around Aldabra Group.
17. 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.
18. Future development on Assomption may include a small tourism guesthouse facility on land and a refurbished or new pier for Coast Guard (Outer Islands Development Plan 2018-2023; Annex II, IDC)
19. Cosmoledo (2015-20) and Astove (2016-21) have management plans that need updating.
20. No management plan for Assomption yet.
21. 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 the habitat features in entirety (Shelf, High Relief and High Relief Bank) and the 200 m depth contour.
22. A proposal was developed by government for a Particularly Sensitive Sea Area (PSSA) for the waters surrounding Aldabra Atoll. This was proposed by the SMSA in [DATE] 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.

23. Management Units:

    - 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 Seychelles Maritime Safety Administration (SMSA) and 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 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 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 drop-off and other locations on Mahe Plateau.
- PetroSeychelles has provided information that 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 traveling across the Amirantes Bank frequently, some swimming as far as 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 during the main nesting season will have to be controlled in order to minimize disturbance to nesting events and nests. Further, the management plan will have to take into consideration that individuals may emerge at D'Arros but also at 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 managed by Islands Development Company Ltd (IDC) and is a public island.
- D'Arros Island is owned and managed by 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 Islands Development Company Ltd (IDC). Etoile and Boudeuse have restricted access because they are Nature Reserves. Starting in November 2022, Etoile and Boudeuse were managed by IDC.
- 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 Islands Development Company (IDC) has delegated authority to manage 16 public islands in the Outer Islands. The islands are managed for conservation and tourism, both 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 activity 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. 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 Outer Island Project Areas through a participatory and consultative process. Draft allowable activities are consistent with the MSP 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 Outer Islands Project areas.
- Fly fishing in the Desroches, Poivre, Alphonse and Farquhar lagoons are currently all catch and release. Stakeholder agreement was reached during consultations that this is allowable for MSP Zone 2 areas and may be subject to conditions. Fly fishing and catch & release needs to follow best practices and on-going discussions with fly fishing community 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 MSP. Note: High standard of sustainability needs to be defined. Examples include Fisheries Improvement Plans (FIP), sustainability standards or certifications, 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 MSP, as per the directions in the MSP Implementation Plan. The criteria for sustainability shall include, and is 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 CR, EN, V, NT 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 Mahe 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 Islands Development Company (IDC) for islands within this area that are publicly owned.
- Constance Bank is an important artisanal fishing locations in some years for artisanal boats.
- 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. Active licensed blocks on the Mahe Plateau.
- A new resort is planned for Coetivy Island and Platte.
- St Joseph Atoll is within Amirantes to Fortune Bank, an atoll that is privately owned and co-managed by Chelonia and Save Our Seas Foundation (SOSF). It is a documented nursery site for sharks, rays, reef fish and 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 and contains a shallow atoll with lagoon and islands, reef fringed, as 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 *(Puffinus pacificus)* colonies and large populations of juvenile and nesting green *(Chelonia mydas)* and hawksbill sea turtles (*Eretmochelys imbricata*). There are more than 20 species threatened with extinction that are resident to St Joseph.
- 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 you can find both green and hawksbill turtles 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 (species name) 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 for based on marine research in and around St Joseph Atoll.
- Save Our Seas Foundation (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.
- Island Development Company informed the SMSP that they are responsible for the African Banks Protected Area (informed 16 Nov 2022). IDC proposes a management unit within Amirantes to Fortune Bank (Marine) Sustainable Use Area that includes African Banks and Remire Islands, and the waters in between.
- A management plan for Amirantes to Fortune Bank (Marine) Sustainable Use Area has been developed (2022-2023; C2O).
- Proposed Management Units as of November 2022 for co-management:
    - African Banks to Remire: the waters between African Banks Protected Area to Remire 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, 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.
    - Coetivy: the waters surrounding Coetivy 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 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 Areas (Fisheries Act).
- Green Island Foundation proposed an Allowable Activity Table (AAT) for Denis Island (Marine), 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 AAT for Denis Island (Marine) and creating one table for all Zone 2 areas.
- A management plan has been 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 by the GOS-UNDP-GEF Outer Islands Project. Desroches has a management plan drafted under the Outer Islands Project (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 of "protected area", with the necessary support for surveillance and enforcement.
- Consultations for this marine area were undertaken by SMSP and by the GOS-UNDP-GEF Outer Islands Project. Poivre has a management plan drafted under the Outer Islands Project (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 Francois 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 by the GOS-UNDP-GEF Outer Islands Project. Alphonse has a management plan drafted under the Outer Islands Project (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 at 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 government for surveillance and enforcement.
- Consultations for this marine area were undertaken by SMSP and by the GOS-UNDP-GEF Outer Islands Project. A management plan for Farquhar Atoll (Marine) Sustainble Use Area was drafted under the Outer Islands Projecdt (2018-2022).
- Consultations facilitated by GOS-UNDP-GEF Outer Islands Project 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 Islands Development Company (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; C2O).

Cosmoledo and Astove Archipelago (Marine) Sustainable Use Area

- Cosmoledo and Astove Islands are publicly owned. The Islands Development Company (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; C2O).

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 is the same as the boundary of the official Port of Victoria and includes the pre-MSP 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 Inner Islands to specifically manage spatial conflicts between diving and fishing activities and consideration in general, of multiple values at dive site locations 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 a Zone 1 or 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 Seychelles Marine Spatial Plan as it pertains to Allowable Activities Tables, General and Area-based Management Considerations, Codes, and other outputs of the SMSP. The list and definitions 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. The list of definitions is developed with all stakeholders including SMSP committees, technical working groups and topic experts. The descriptions are not intended to define thresholds or acceptable intensity of use because this varies from place to place and is, or may be, determined by management plans and/or regulations. Wherever possible, a published or

authoritative description or definition is used; those without a source are a local or general description of the use or activity. The Master List of Definitions will be finalised for the Seychelles Marine Spatial Plan document. 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.

GAZETTING MARINE ZONES

The nomination process to gazette the new marine protection areas was similar for all three Milestones was similar. For all three Milestones, the National Park and Nature Conservancy Act (NPNCA) 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 NPNC Act 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 was aligned with discussions for the need for a sustainable use category. Simultaneous to the SMSP process was the revision of the NPNC Act to a new Act.

Steps for the legal designation of the MSP Marine Protection Areas. The steps were developed in 2016 and updated in Oct 2019 to sign into law the Zone 1 and 2 areas using the National Park and Nature Conservancy Act (NPNCA).

1. Executive Committee – Approval for consultations on Milestone 3 zoning design options. Approve MSP Core Team to prepare Cabinet Memorandum for MEECC present to Cabinet for approval to prepare Nomination File MSP Milestone 3
2. MSP 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. MSP 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. MSP 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. MSP Core Team – Presentation to Cabinet on behalf of MEECC of Cabinet Memorandum
14. Cabinet – For decision: approval for MEECC to prepare Nomination File MSP Milestone 3
15. MSP Core Team – Prepare Nomination File (text, coordinates, maps, Annexes)
16. MSP 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. MSP Core Team – Post Notice of Intent and Nomination File on MSP 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 in to law.

Chapter 4: Implementation of the SMSP

This chapter is the Implementation Plan for the Seychelles MSP Initiative. Developing an implementation plan is an important component of a marine spatial planning process and typically covers several topics including governance, financing, monitoring, and evaluations. The ideal implementation plan would include a list of implementation priority projects with estimated costs, surveillance and monitoring options for each marine protection area and 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.

Phased-in implementation for the enforcement of Allowable Activities was discussed during the development of the General Management Considerations and includes, but is not limited to, the following considerations:

- 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.
- Seychelles-EU Fisheries Partnership Agreement with the industrial purse seine fishery and individual agreements with vessel owners in 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 the Zone 1 areas on the Amirantes Group.

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

A timeline for the enforcement of the marine protected areas needs to be determined before the MSP is signed into law and comes into full force and effect.

As per 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.

MSP POLICY

The MSP Policy contains an Action Plan with five Objectives and a total of 30 Activities leading to 35 Results. The progress towards completing those Activities that could be achieved before implementation has been good, with only 3 activities (10%) not started; completed Activities total 13 of 30 (43%) and in progress are 14 of 30 (47%).

2434 Table [-]. Summary of the Results and Activities in the SMSP Policy Action Plan.

Action Plan Objectives	Results				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	13	14	3	30	65

2435

2436 All Activities from the MSP Policy Action Plan were reviewed, discussed and prioritised for implementation
2437 during stakeholder workshops in October 2023. All activities in Objective 1 are completed. In Objective 2,
2438 management plans are underway for

2439 Table [-]. Summary of the status and proposed timing for remaining Activities in the SMSP Policy Action
2440 Plan. .

Activity #	Description	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				
	Activities 9-16	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.	Completed		
2.7	Develop specific area draft management plans with clear measures to support area and MSP objectives.	In progress	X	
2.8	Draft plans reviewed by scientific and PA management peer group.	In progress	X	
2.9	Implement area management plans	Not started		X
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.	Completed but being updated *		
3.8	Develop selected option i.e. administrative structure, legislation/regulations and budget requirements and submit for approval.	Completed but being updated *		
3.9	Develop Regulations and/or Act, as appropriate, in liaison with appropriate agencies by 2021.	In progress	X	
3.10	Gazette/promulgate regulations and/or Act by 2021.	In progress	X	

Activity #	Description	Status	Year 1-2	Year 3-5
3.11	Assess available financing [see Note 1] and include projected costing [see Note 2] and funding gap in strategy to address the long-term financing of the MSP.	In progress	X	X
3.12	Identify and employ MSP coordination agency staff and commence implementation of MSP by last quarter of 2021.	In progress	X	
Objective 4: Monitoring, data collection and analysis is optimised, and management-oriented research undertaken to support attainment of MSP objectives and its adaptive management.				
4.8	Review panel operational, MSP scientific practices established etc.	In progress*		
4.9	Identify data requirements to support MSP and crosscutting Area management plan objectives. (X-ref Activity 4.8).	In progress*		
4.10	Identify data requirements to support priority, area-specific management objectives. (X-ref Activity 4.8).	In progress*		
4.11	Establish criteria for MSP datasets to facilitate analysis and utility (X-ref Activity 4.8).	In progress*		
4.12	Undertake independent peer review of all datasets (X-ref Activity 8).	Not started		X
4.13	Maintain data in formats suitable for transfer among tools and programs.	Completed		
4.14	Identify strategic, crosscutting and key gaps in national knowledge and data for MSP management	In progress		X
4.15	Develop a prioritised management-oriented research agenda.	In progress		X
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	Not started		X
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	In progress		X
5.7	Provide regular stakeholder updates on development and implementation of the MSP with focus on upcoming opportunities for participation	In progress	X	X
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.	In progress	X	X
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.	In progress		X
Total number of Activities to complete in the Action Plan			8	10

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 of Environment; the Department of Blue Economy, or a new independent Ocean Authority. In 2018, stakeholders noted that due to the broad and cross-cutting nature of the SMSP, there was stakeholder consensus that the governance agency should be independent in its mandate and that administratively it 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. The Authority option was strongly favoured by stakeholders. In September 2020, after having been endorsed by Cabinet in 2018 and 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 adaptative 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, under the principle secretary's office of MACCE has been operationalised with four staff recruited in 2024. These include a Principal Project Coordinator, a Compliance Officer, a Protected Area Specialist and Network Coordinator and an Administrative Outreach Manager.

The draft of the "interim" Agency, which was intended to expire by the end of 2024, has not been finalised as of December 2024. In light of this delay it is now proposed that the agency option no longer be pursued as if continued now it would only function for a few months before being due to be replaced by the Authority. Rather it is recommended that MACCE move directly to the development and promulgation of the Seychelles Ocean Authority Bill so that the Authority may be operational from January 2025 in line with the 2021 Cabinet decision. This course of action is also in line with the expectations of TNC and the various donors for the Seychelles debt conversion.

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 Nov 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 km2 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 coordinates for the designated Marine Protection Area are the official boundary for the zone and the management unit has geographic coordinates to clearly delineate the spatial extent of the co-management responsibilities.

There are five (5) management units proposed within the SMSP zones: one within Aldabra Marine National Park for Assomption Island and four within Amirantes to Fortune Bank Sustainable Use Area for African Banks to Remire, and one each surrounding St Joseph Atoll, Coetivy Island, and Platte Island (Table [-]). The St Joseph MU was proposed in discussions with Save Our Seas Foundation and the remaining four in discussion with IDC. 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.

The Assomption Management Unit indicates the extent of co-management proposed by the Island Development Corporation (IDC). The management unit boundary fully contains two shelf, high relief habitat features around the island and is 159 $km^{2.}$

The African Banks to Remire Management Unit boundary fully contains a shelf, high relief bank feature (sand cay rim) and high relief shelf. The coverage of this MU includes both African Banks and Remire islands and is 1,325 km^2.

The St Joseph MU indicates the extent of co-management proposal from the Save Our Seas Foundation (SOSF). The management unit fully contains two high relief bank platform reef habitat features and is about 74 km^2.

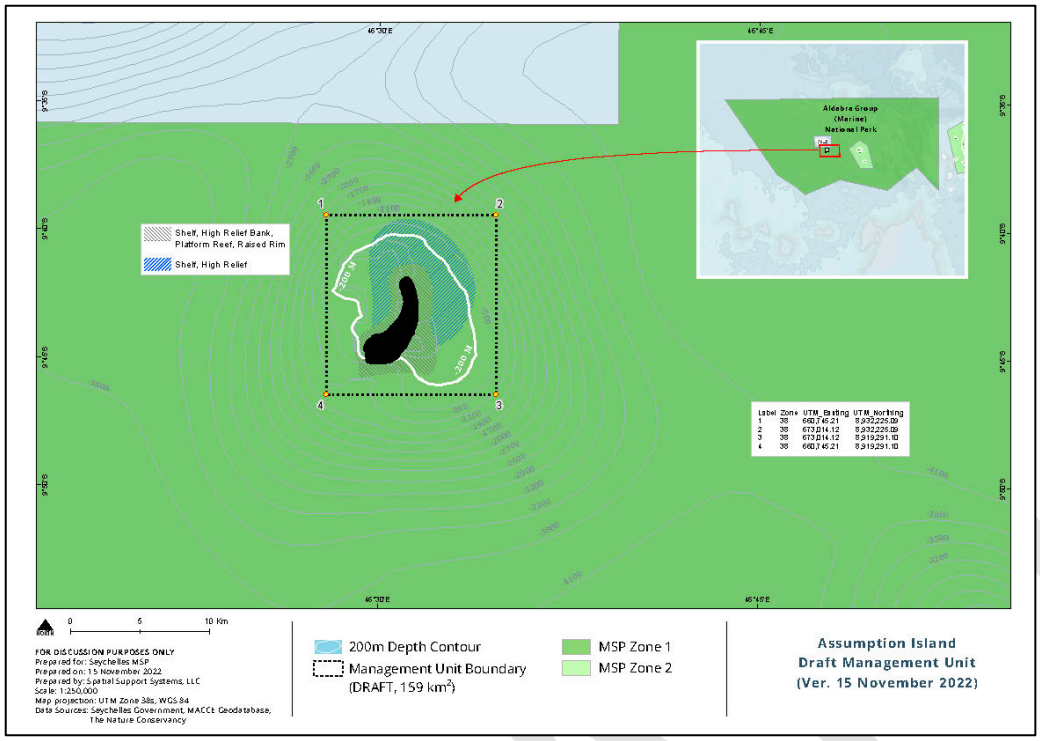
The Coetivy and Platte management units were proposed by IDC and are the existing zone boundary for the fishing by foreign vessels prohibited areas. The Coetivy MU and Platte MU both contain high relief bank platform reef and shelf high relief habitat features, and are 2,950 and 2,377 km^2, respectively.

To finalise the management units need approval from the MSP EC, MACCE completes the co-management agreements, and management plans are developed, approved and implemented.

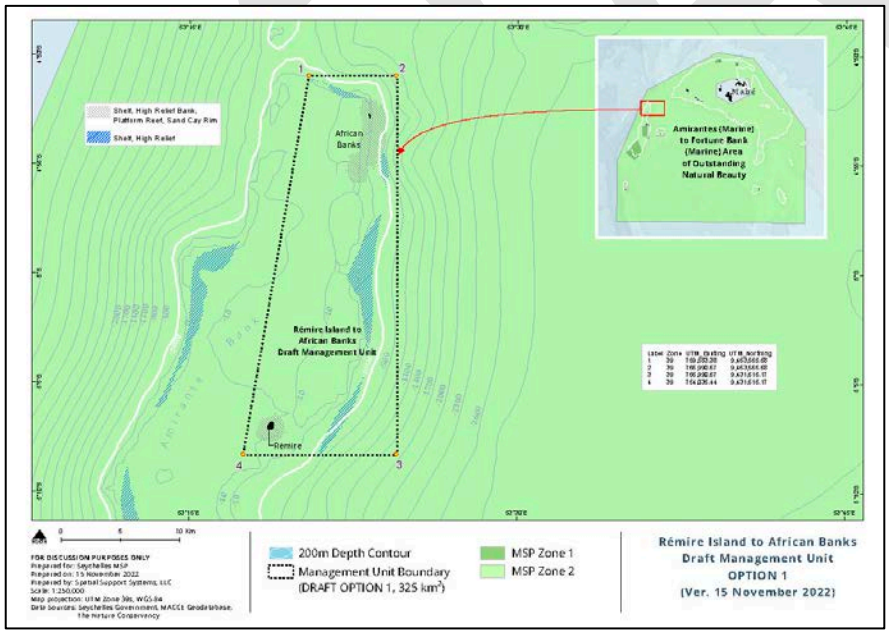
Table [-]. Management units within Marine Protection Areas in relation to the co-management proposals.

Marine Protection Area	Area Size (km^2)	Proposed Co-Management Entity	Management Plan Development	Management Unit Area Size (km^2)
Marine National Parks				
Aldabra Group	201,235		Blue Nature Alliance funding	
Assomption MU		IDC	See: Aldabra Group	159
Sustainable Use Areas				
Amirantes to Fortune Bank	217,589	Various[3]	SWIOFish3 funding	
African Banks to Remire MU		IDC; Foundation		325
St Joseph MU		SOSF	Save Our Seas Foundation	73.6
Coetivy MU		IDC		2,950
Platte MU		IDC; Foundation		2,377

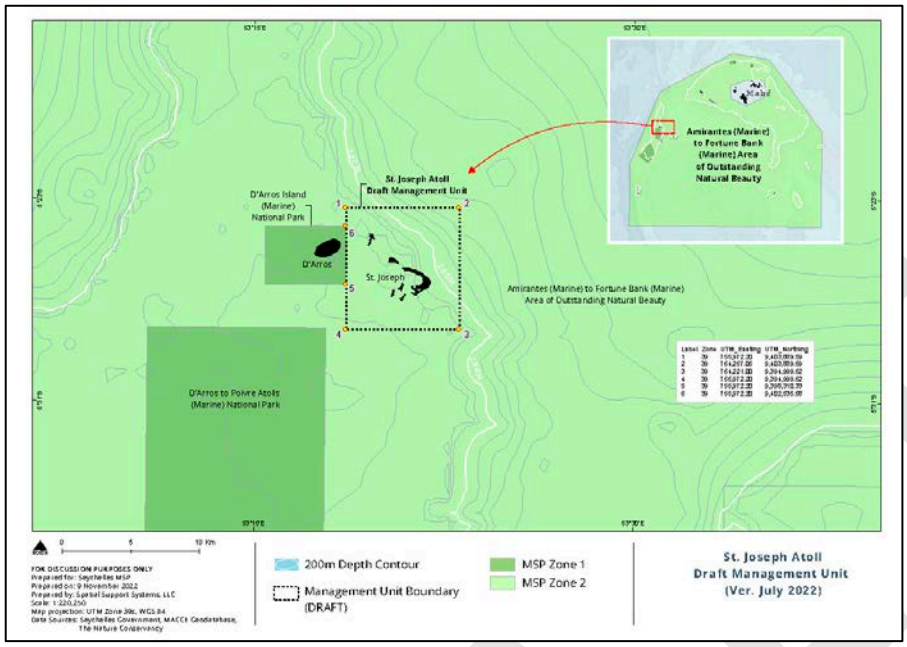
Aldabra Marine National Park – Assomption Management Unit (awaiting approval)



Amirantes to Fortune Bank Sustainable Use Area – African Banks to Remire Management Unit (awaiting approval)

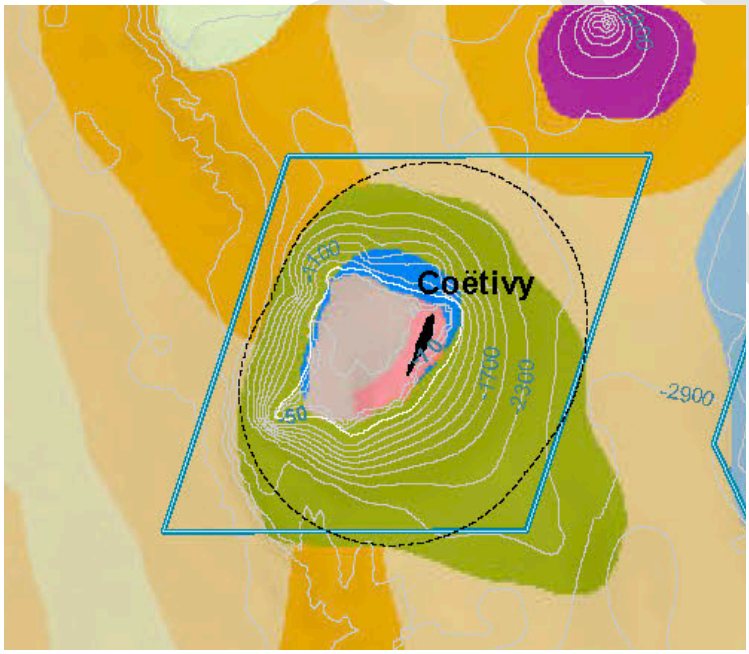


Amirantes to Fortune Bank Sustainable Use Area – St Joseph Atoll Management Unit (awaiting approval)



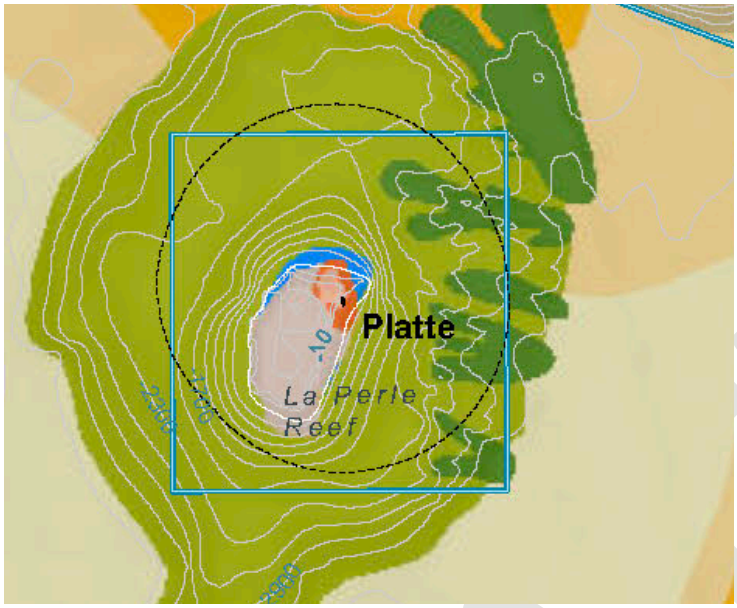
Amirantes to Fortune Bank Sustainable Use Area – Coetivy Management Unit (awaiting approval)

Temporary map



Amirantes to Fortune Bank Sustainable Use Area – Platte Management Unit (awaiting approval)

Temporary map



Co-management Agreements

The co-management agreement template is in development and will be finalised before the Plan is completed. The co-management agreements are essential for clarity of roles and responsibilities between government parties or between government and non-government parties.

The scale of additional financial resources 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; and,
- Encouraging management agencies to follow common frameworks and minimum standards.

COSTING AND FINANCING

A review of the cost of management for 1,497 km2 existing and prospective MPA sites (based on analysis conducted in 2014, 2015 and 2017) of areas pre-MSP, the average annual per km2 expenditure is USD 3,271 (or USD 272 per month). However, to implement an optimal level of management USD 12,083,479 (or USD 8,067 per km2) is required (Rylance & Barois, 2016). The literature also shows that single large no-take reserve is less expensive to manage than a multiple-use MPA (including a 30% no-take area) of the same size.

Costing Analysis 1.0

Costing and financing for the 400,000 sq. km in Marine Protection Areas was estimated in 2019 including development of three scenarios for protected area implementation, costs and possible budget or funding.

- 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. that only exist on paper) which have ineffective and insufficient management (Wilkie et al., 2001).
- 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, 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

Three large-scale management scenarios were developed, through a consultative process, in order to determine the costs dependent on the following levels of management (slide for scenarios)

The scenarios took into account the costs for planning and zoning, compliance and monitoring, surveillance and enforcement, education and outreach, as well as biophysical, economic and social research and monitoring.

Important to consider:

1. Establishing new MPAs are 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; and,
4. MPAs with a lower level of stakeholder pressures have a lower per unit cost than MPAs with larger number of different types of users.

The report outlines that the annual cost of management for the 400,000km2 of MPAs ranges from USD 30million to USD 42million per annum. This equates to an average management cost of between USD 75 and USD 106 per km2. These figures are relatively comparable to other LSMPAs identified, once accounting for inflation.

The annual cost of management equates to approximately between 1.8% and 3.6% of the total contribution of fisheries and tourism to GDP . It is envisaged that with the implementation of the activities outlined above, GDP will increase further, reducing the proportional costs of management. In addition, accounting for the ecosystem service generated by the ocean, the cost of management at its most expensive option equates to 0.06% per annum.

Costing Analysis 2.0

A Costing 2.0 analysis was completed in 2024 and will be summarised in the Plan document. The full report can be found on the SMSP website.

MONITORING, ENFORCEMENT AND COMPLIANCE (MCS)

The SMSP zoning designs were developed in full consultation with representative's stakeholders and civil society organisations (CSOs) including the Seychelles Maritime Safety Authority (SMSA), Seychelles Fishing/Fisheries Authority (SFA), as well as the Seychelles Coast Guards (SCG), Seychelles Port Authority (SPA), National Information Sharing Coordination Centre (NISCC) and Regional Coordination Operations Centre (RCOC). Implementation of the marine spatial plan has been a key consideration since the start of the initiative. Several guiding principles for decisions, developed by the stakeholders in 2014-2015, reflect the importance of 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-for adaptation swap in 2016, the Government of Seychelles and other partners. The SeyCCAT Act was passed in 2015 and revised in 2022.

The implementation of the SMSP 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 square kilometer Exclusive Economic Zone and the best zoning design(s) to support monitoring and ensure high levels of compliance, for example, straight lines and simple shaped polygons (square, rectangles). The components of the SMSP Action Plan from zoning to implementation includes the Marine Spatial Plan document, Legislation, Operations, Management and supporting documents. The Government of Seychelles, The Nature Conservancy, and SeyCCAT have partnered to raise an additional $4.9M to finance the transition from zoning to implementation for the years 2022-2025. Through this additional support, and other ongoing support from partners such as the GoS-GEF-UNDP projects and SWIOFISH3, World Bank, numerous activities have contributed to the implementation of the Marine Spatial Plan so the implementation of the SMSP including the new marine protection areas will be effective and successful.

The Seychelles Marine Spatial Plan has been 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 a trust – Seychelles Conservation and Climate Adaptation Trust (SeyCCAT) – important support for implementation of the MSP with funding from the Trust and from private grants.

A comprehensive policy and legislative review was completed in 2016. For the SMSP to be successful, the SMSP stakeholders share a consistent message with the SMSP process team that the zones that are developed during the MSP 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 has also commenced to develop strategic management frameworks for the Zone 1 and 2 areas.

- Agencies responsible for monitoring, enforcement and compliance need to be listed.
- Involvement in the planning process and information provided to determine best approach
- Brief summary of the maritime infrastructure to support MCS in Seychelles. Radar stations that exist currently in Seychelles (mapped, if possible).
- Enforcement capacity in Seychelles in terms of patrol vessels in the Coast Guard
- Text for the regulations to enforce the SMSP and zones.
- MCS and the co-management agreements.
- Summary of information from the Capacity Needs Assessment (2025).
- 5km Voluntary buffer around islands and atolls from PetroSeychelles exploration and development.

Key components of implementation:

Coast Guard vessels are important enforcement assets, but the reaction time of vessels to incidences especially in the outer islands is challenging and vessels 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 scientific monitoring component.

A revised MCS plan for MPAs created under the SMSP was completed in 2024(?). 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 Marine Protected Areas (MPAs) in Seychelles. The project, initiated in January 2023, was led by NLA International (NLAI) in collaboration with the Ministry of Agriculture, Climate Change and Environment (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 Monitoring, Control, and Surveillance (MCS) capabilities, leveraging satellite surveillance, sensors, and artificial intelligence 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.

Vessel Monitoring Systems are a requirement for all vessels. It is predicted that it is relatively easy to add MPA coordinates to VMS systems (and electronic navigation charts through the UK HO) which would alert vessels that they are entering and exiting the relevant 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.

At present, under the Fisheries Act all vessels conducting fishing activities require a fishing licence. In October 2014, SFA legally took responsibility from the Seychelles Licencing Authority for the processing and issuance of fishing licences. Under the new MPAs, each vessel licenced through SFA or the Ministry of Tourism could receive specific licences for allocated areas, ensuring that vessels entering specific zones are complaint with the zone's allowable activities. This information could be digitally catalogued on a database linked to the VMS signal. Therefore, vessels entering an area without the relevant permits would trigger a violation.

Aerial surveillance is applied 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 8 hours, can cover 2,400 km (1,300 nautical miles) are equipped with infra-red, radar and cameras.

Radar stations are managed by the Seychelles Coast Guard and currently operates 5 stations on the following islands: Mahe, Alphonse, Farquhar, Assumption and Astove/Cosmoledo. These radar stations have a range of 25-30 nautical miles and the range of the AIS from the tower is 80 nautical miles. These stations combine satellite, VMS and AIS information which is transmitted in real time. An additional eight radar stations would create complete cover for the EEZ. Radar stations are currently being upgraded as well as an additional station on Praslin/La Digue.

Drones could be used to complement the activities of the Air Force or provide surveillance for near shore MPA areas, as well as provide additional management activities, such as habitat mapping. A pilot is currently underway between FishGuard and the SFA with the aim to support fisheries surveillance efforts through the use of long-range drones. Testing is currently underway, which will determine the final costing and viability of the project. However, under the testing phase, it is estimated that each drone cover 10,000 km² in one flight or do a round trip to a point located at around 350 km offshore.

The drones could operate fully autonomous missions where having a pilot on the ground throughout the flight period is not required. It is initially anticipated that four drones could operate from separate bases even spread throughout the EEZ.

Land based surveillance: A clear and consistent catch monitoring system is essential in order to understand the impact of fishing efforts in the designated zone 2 MPAs in order to inform long-term decision making. Comprehensive logbook reporting or statistically robust sampling of landing sites 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 the regulations

Seychelles is a signatory to the Agreement on Port State Measures. Other countries party to the PSMA include Mauritius, Madagascar, Sri Lanka, South Africa, Mozambique, European Union grouping, It is the first binding international agreement that specifically targets illegal, unreported and unregulated (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 ports10. 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.

Satellite Surveillance: 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 (ESA-IO) for Seychelles to host a regional centre for operational coordination. This work uses AIS to track the VMS signals of vessels, determining whether vessels are conducting fishing activities (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.

SFA's Monitoring Control and Surveillance (MCS) Section is comprised of the Monitoring and Control Unit and the Enforcement Unit.

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 (NPOA–IUU) were submitted.

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.

Regulations and Enforcement

The government passed a national MSP policy in September 2020, laying the important legislative foundation for implementation. Discussions are underway about what regulations are needed to enforce the MSP's protections and allowable activities.

The development and drafting of strategic management frameworks for the marine protection areas has commenced. This work will also inform the development of management plans for these areas.

The first draft of the Establishment Bill to provide the enabling legislative framework for an independent Ocean Authority was circulated in May. Comments have been compiled for further refinement and finalization by the Attorney General's Office.

An GoS-UNDP-GEF The Outer Islands Project funded the drafting of regulations for the Zone 2 areas for 4 outer islands that were project sites in that project.

MANAGEMENT PLANS

Management plans for marine protected areas have been developed for most of the Marine Protected Areas in Seychelles that were designated before the MSP process. The process of integrating the new marine protection areas, some of which are very large (more than 200,000 km2) into the existing structure for marine protected areas has resulted in a decision by government to develop a template for management plans for protected areas in Seychelles.

Management Plan Template

A template for developing management plans for protected areas in Seychelles has been finalised. It includes sections on the national context, site governance, protected area description, current use, management context, management strategies, performance measuring framework, and review process. The template provides detailed explanatory notes for each section, including mandatory and discretionary elements, and emphasizes the importance of stakeholder consultation, legal frameworks, and sustainable management practices. It also includes a comprehensive list of acronyms and symbols, and additional notes on management and operational strategies. The template aims to guide managers in creating effective, internationally compliant management plans for protected areas.

Management plans have already been developed for: Aldabra World Heritage Site (2016), which approved a boundary extension to increase its size to 2,559.019 km^2; 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 have been drafted (2018); as well as, a number of Inner Island PA management plans such as the islands of Cousin, Curieuse and Aride, for example. Average cost to develop a management plan is USD12,000 per plan.

	Zone 1 Areas (Marine) National Park[2]	km^2	Co-Management Interest Known	Management Plan Funding Known	Approved Management Unit (km^2)
1	Bird Island	106	Island owner	BNA, (option)	

[2] National Park and Nature Conservancy Act

	Zone 1 Areas (Marine) National Park[2]	km²	Co-Management Interest Known	Management Plan Funding Known	Approved Management Unit (km²)
2	D'Arros	25	SOSF- DRC	Oceans 5, SOSF (Parks Work)	
3	D'Arros to Poivre	370	IDC; SOSF-DRC	BNA (option)	
4	Amirantes South	1,335	IDC; Foundation(s); SOSF-DRC	BNA (option)	
5	Aldabra Group	201,235		BNA (option)	
	Assomption		IDC	Management unit under Aldabra Group	159
	Total Zone 1	**203,071**			

2762

2763

	Zone 2 Areas Sustainable Use[3]	km²	Co-Management Interest Known	Management Plan Funding Known	Approved Management Unit (km²)
1	Amirantes to Fortune Bank	217,589	Man committee proposed in Management plan	SWIOFish3 (C2O fisheries);	
	African Banks to Remire		IDC; Foundation	Part of AFB Management plan	325
	St Joseph		SOSF	Oceans5, SOSF (Parks Work)	73.6
	Coetivy		IDC	Part of AFB Management plan	2,950
	Platte		IDC; Foundation	Part of AFB Management Plan	2,377
2	Denis Island	31	GIF; Island owner, Denis Island Pty Ltd	Oceans5 (Bee Ecological)	
3	Desroches Atoll	333	IDC; Foundation	Outer Islands Project (exp. 2022)	
4	Poivre Atoll	56	IDC	Outer Islands Project (exp. 2022)	
5	Alphonse Group	215	IDC; Foundation	Outer Islands Project (exp. 2022)	
6	Farquhar Archipelago	14,482	IDC; Foundation Man committee proposed in man plan	SWIOFish3 (C2O fisheries)	
7	Farquhar Atoll	415	IDC; Foundation	Outer Islands Project (exp. 2022) Part of Farquhar Archipelago MP	
8	Cosmoledo and Astove	5,321	IDC; Foundation Man committee proposed in man plan.	SWIOFish3 (C2O fisheries)	

[3] National Reserves and Conservancy Act 2022; category re-designation published on 23rd October 2023

	Zone 2 Areas Sustainable Use[3]	km²	Co-Management Interest Known	Management Plan Funding Known	Approved Management Unit (km²)
	Total Zone 2	**238,442**			
	Total Zone 1 and Zone 2	**441,513**			

Chapter 5 Monitoring and Evaluation of the SMSP

MONITORING AND RESEARCH PRIORITIES

The MSP Initiative will identify ecological, economic and socio-cultural indicators to monitor and evaluate after the marine spatial plan is implemented to see what changes. 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 contain an indicator matrix that was endorsed. This indicator matrix will need to be integrated into the MSP monitoring and research priorities.

The SMSP can look to the Seychelles Ocean Research Agenda (SORA) for the development of monitoring and research priorities, for example, The SORA is a comprehensive strategy aimed at promoting sustainable ocean science in Seychelles. It was developed by Bee Ecological Consulting and supported by various organizations including SeyCCAT, BERI, and the Blue Nature Alliance. The document outlines the following key components:

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

Priority Research Areas: Six thematic areas are identified:

- 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 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 and management and other pertinent management and administrative processes.

In 2024, The Department of Environment (MACCE) in partnership with the Blue Economy Research Institute (BERI) and in consultation with other key technical stakeholders (e.g. SBS, NISTI etc.) also developed and refine an inner island (Zone 3) ambient environmental quality (AEQ) monitoring protocol.

REVISIONS AND ADAPTATION OF THE PLAN

Marine Spatial Plans are intended to be living documents in the sense that the plans are reviewed and adapted over time. For some of the MSP developed in Europe, such as the Norway and Belgium Marine Spatial Plan, their review cycle is in 5-year intervals (REF).

A timeline and process for review needs to be developed before the MSP is signed into law. Key questions for the revision and adaption of the plan include:

- What is the process to update the Plan?
- What aspects of the Plan are revised and adapted over time?
- How often (how many years) should the Plan be updated?
- What are the indicators to monitor the Plan?
- How are new uses and activities integrated into the Allowable Activities Tables and documents?
- What is the process to make decisions on new uses and activities within the MSP zones?

The proposed review cycle for the SMSP is suggested as between 5 and 10 years, with longer being most likely than shorter. For example, the review could start at year seven and take 24 months to review monitoring of indicators, gather data, analyse data and information, stakeholder consultations, and develop recommendations, and 12 months to update the plan. A revised plan would be available in year 10.

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 with 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 from other planning processes. Ask for examples of documents and templates so that you're not starting 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 MSP 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 made sure 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 and 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 MSP from other geographies were used to develop the Seychelles process, lessons from the Seychelles MSP will apply elsewhere.
- The Territorial Sea boundary (12 nm) was not officially gazetted in Seychelles at the time the SMSP process launched. The MSP 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.

Process Design

- Excellent notes are needed from workshops and minutes because key issues may arise multiple times. A searchable advice log was key to summarise topics or content in order to provide summaries of stakeholder input to date.
- Milestones created clear steps along the way and 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 an MSP 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 that spoke local Creole language.

Stakeholder Engagement

- Ensure 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 with them of proposals 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 was 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. Use participatory mapping to create new spatial data for marine uses and activities especially for uses that are not easily mapped because they lack the basic or foundational data.
- Use modelled data from reliable publications, such as Harris et al 'Deep-sea Geomorphology of the World'.

Zoning to Implementation Phase

- This phase took place from March 2020 to 2024/2025. 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 has taken place over three national elections and multiple Ministers, CEOs, Principal Secretaries, Director Generals, Directors, and essential technical staff.
- Equitable opportunities so that all stakeholders could participate fully in the committee meetings and workshops. The SMSP developed an honorarium policy for Steering Committee and Technical Working Groups.
- Engagement with marine sectors that are at sea, making a living.
- Out of scope for the SMSP was illegal activities such as drug smuggling, human trafficking and endangered species (CITES) trafficking. It was important to work with maritime law enforcement personnel to understand the limits and boundaries for the SMSP process and what would not be included for the development of management plans.

Global Pandemic

- During the global pandemic 2020-2022, the SMSP had to adjust to online and distancing for in-person engagement.
- In 2020-2022, it was not a reasonable assumption that everyone could switch to online meetings from in-person for several reasons. First, the pandemic created an enormous number of new tasks, that took time, for everyone and especially those living on small islands with limited options for purchasing essential goods and services. Secondly, an online option assumes that all participants or attendees have access to a device for the virtual meeting (phone, tablet, laptop, desktop).
- Internet speed in Seychelles has improved greatly since the SMSP started in 2014. The options available on Mahe, Praslin and La Digue are very different from a decade ago. In 2020-2022, online meetings were difficult to attend amidst daily life during the pandemic including dealing with active covid cases.
- Software to use Zoom or other platforms may not work well in all locations because may need higher internet speeds than what are available and may need newer laptops and operating systems than stakeholders have at that time.
- Restarting in-person meetings began in April 2022 for those stakeholders in the country. In-person meetings posed risks of exposure and additional measures were needed to comply with the Seychelles health and safety guidance and protocols for the covid pandemic.

Chapter 7: Abbreviations and Glossary

ABBREVIATIONS

EBM - Ecosystem-based Management

GEF - Global Environmental Facility

GOS - Government of Seychelles

IPCC - Intergovernmental Panel on Climate Change

IUCN - International Union for the Conservation of Nature

MPA - Marine Protected Area

MSP - Marine Spatial Planning

NGO - Non-Governmental Organisation

PCU - Programme Coordinating Unit

SeyCCAT - Seychelles Conservation & Climate Adaptation Trust

SIDS - Small Island Developing States

TNC - The Nature Conservancy

UNDP - United Nations Development Programme

GLOSSARY

To be added for the final version of the Plan.

Chapter 8: References

Incomplete and will be completed before finalising for copy edit – may use a reference citation software to ensure all references are complete.

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Chapter 9: Supplemental Documents and Annexes

Supplemental documents and Annexes are being finalised and will be available on the website to support the final version of the plan.