

# FUNDING MARINE PROTECTION AT SCALE

The current status and future development of financing for Large-Scale Marine Protected Areas



Prepared by Conservation International, Starling Resources and Big Ocean.

Authors: Olive Andrews, Robert Baigrie, Rhona Barr, Noah Greenberg, Bridget Kennedy, Nai'a Lewis, Luca Mori, Christopher Stone, Camilla Sundberg, Sue Tai, and Nawa Thalo.



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# Preface

## A unique juncture

Despite the establishment of the Great Barrier Reef Marine Park (GBRMP) in 1975, it would be 25 years until the next Large-Scale Marine Protected Area (LSMPA) emerged in 2000. When the Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve, now known as Papahānaumokuākea Marine National Monument (PMNM), was established, marine management at-scale stood poised to become an official genre of marine conservation. In the 14 years that followed, eight more vast MPAs were established, and with each successive year, the scope and scale of these sites also increased.

As of May 2020, there are about 35 LSMPA depending upon the definition used (Figure 1); of these, 15 sites are only five years old, which makes the overall field quite nascent. Of all LSMPAs globally, only three have had policies and active management in place for a decade or more, and only a handful are in the process of formal management planning.

Not surprisingly, managers and national governing agencies' needs have also expanded, and the discussion around the development of best practices, specific to very large MPAs, is not only timely, it is vital. The field's professionalisation began in 2010 when Big Ocean, a network of the world's large marine managed areas, was launched by the then six largest MPAs worldwide. This network was created by and for managers and has become a leading proponent of best-practice developed through peer-learning, capacity building, and outreach. However, with so many new sites having come online in rapid succession, and with roughly half only in the last five years, additional support must be provided to them. Continuing efforts must also be made to maintain quality management at veteran sites, which in some cases are experiencing external challenges due to global threats as well as internal challenges from budget cuts and ill-fitting or insufficient financing mechanisms (FMs).

## Developing guidance

With documented learnings from the first twenty years of marine management at-scale centering around the design, establishment, and active in-situ management of LSMPAs, it is time to focus on sustainable financing. In this financial context, it is also important to collect lessons learned from smaller MPAs and MPA networks and adapt this knowledge to fit a vast array of marine sites' needs. This report seeks to create a starting point

for further investigation and development of innovative FMs at large-scale.

Multiple internal products were summarised and synthesized to develop this report, which is designed for a wider audience - namely, practitioners, actively working to further large-scale marine conservation initiatives.

From the outset, the primary objective was to codify early lessons learned from the past two decades of LSMPA management and combine it with experience from other sectors and related contemporary research and literature. The findings outlined in this report build on and complement existing standards. The goal is for readers to be able to readily and easily put into practice the information offered. With that said, this report recognises the International Union for the Conservation of Nature (IUCN) Best Practice Protected Area Series Vol. 26 - *Large-Scale Marine Protected Areas: Guidelines for design and management* (Lewis et al., 2017) - as a foundational resource for developing the evaluation matrix used across all phases of this project.

However, substantive literature with concrete conclusions specific to LSMPA financing is lacking, making definitive next steps challenging to develop. Furthermore, most LSMPAs still rely primarily on government funding; thus, innovation has been slow. However, this is not necessarily negative, considering the nascent nature of the genre. Just as mistakes can offer equal or more relevant experience than successes, a great deal of learning comes from identifying the gaps or what is not working in a given situation. This report evaluated the available FMs and their potential use for LSMPA management agencies and combined that with a collection of initial ideas and recommendations for use or consideration in the development of a robust suite of tailored options for ocean conservation at-scale.

## Authors

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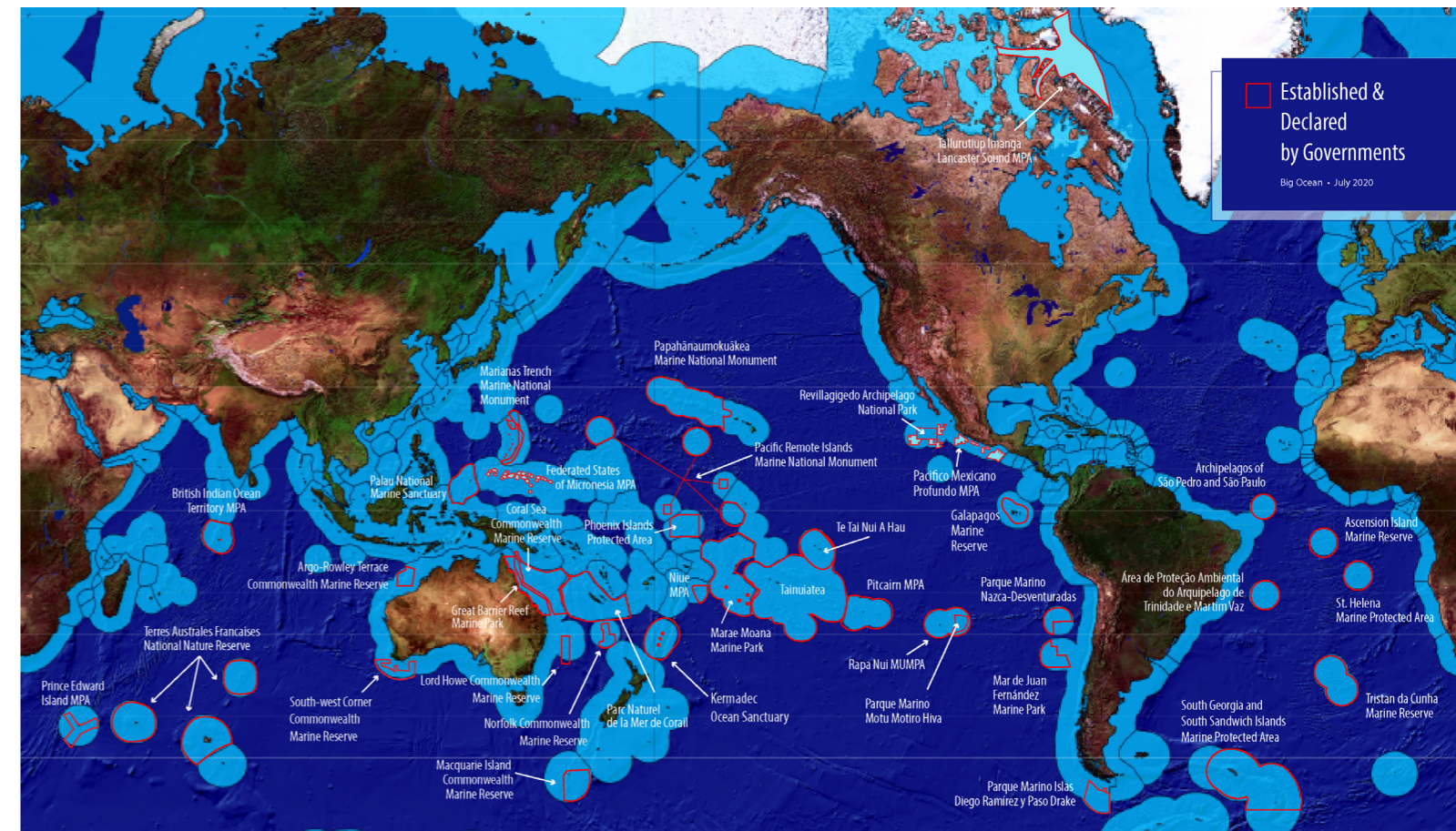


Figure 1: The world's current established LSMPAs.

Agency (FFA); Pacific Islands Regional Oceanscape Program (PIROP); the Office of the Pacific Ocean Commissioner (OPOC); the World Bank; and Global Environment Facility (GEF).

In addition, we would also like to thank all those stakeholders who gave their valuable time to assist us in developing the case studies. These include:

**Galapagos Marine Reserve:** Stuart Banks, Science Marine Manager, Conservation International Americas

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**Motu Motiro Hiva Marine Park and Rapa Nui MUMPA:** Dr. Carlos Gaymer, Ph.D, Director del Núcleo Milenio ESMOI; Gustavo San Martin, Under-Secretariat for Fisheries, Chile.

**Pacifico Mexicano Profundo Biosphere Reserve:** Rodolfo Palacios Romo, Regional Director Baja California Peninsula and Pacifico Norte, CONANP.

**Palau National Marine Sanctuary:** Yimngang Golbuu Director, Palau International Coral Reef Center (PICRC); Arnice Yuji, Director of Administration, PICRC; Victor Remengesau, Director, Marine Law Enforcement Division; King M. Sam, Special Assistant, Ministry of Natural Resources, Environment and Tourism; Tarita Holm, Environmental Consultant; Jovalyn Ilong Koshiba, Grants Program Officer, Protected Area Network Fund (PANF); Regis Emesiochel, General Manager, (PANF).

**Papahānaumokuākea Marine National Monument:** Athline Clark, Superintendent for Papahānaumokuākea Marine National Monument.

**Phoenix Island Protected Area:** Tukabu Teroroko, Director, PIPA Implementing Office; Martin Pine, Finance Officer, PIPA Implementing Office; Tiioa Roneti, Administrative and Legal Officer, PIPA Implementing Office.

This report is aligned to the ADB-led MPA financing project which aimed to conduct a pre-feasibility assessment of potential FMs for MPAs in Kiribati and Tuvalu.

# Abbreviations and acronyms

BIOFIN	Biodiversity Finance Initiative
CFA	Conservation Finance Alliance
CI	Conservation International
CTF	Conservation Trust Fund
DFID	Department for International Development (United Kingdom)
DNS	Debt-for-Nature Swap
ES	Ecosystem Services
FM	Financing Mechanism
GBRMP	Great Barrier Reef Marine Park (Australia)
GBRMPA	Great Barrier Reef Marine Park Authority (Australia)
GCF	Green Climate Fund
GEF	Global Environment Facility
GMR	Galapagos Marine Reserve (Ecuador)
IBRD	International Bank for Reconstruction and Development
IUCN	International Union for Conservation of Nature
IUU	Illegal, Unreported and Unregulated
LSMPA	Large-Scale Marine Protected Area
MAR	Mesoamerican Reef Region
M&E	Monitoring and Evaluation
MMHMP	Motu Motiro Hiva Marine Park (Chile)
MMMP	Marae Moana Marine Park (Cook Islands)
MPA	Marine Protected Area
NGO	Non-Governmental Organisation
NPCS	Natural Park of the Coral Sea (New Caledonia)
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
PA	Protected Area
PES	Payment for Ecosystem Services
PIPA	Phoenix Islands Protected Area (Kiribati)
PMNM	Papahānaumokuākea Marine National Monument (United States)
PMPBR	Pacifico Mexicano Profundo Biosphere Reserve (Mexico)
PNMS	Palau National Marine Sanctuary (Palau)
POFP	Pacific Ocean Finance Programme
PSA	Pago por Servicios Ambientales
RAMPAN	Raja Ampat Marine Protected Area Network (Indonesia)
RAPA-MUMPA	Rapa Nui Multiple-Uses Marine Protected Area (Chile)
SeyCCAT	Seychelles Conservation and Climate Adaptation Trust
SIB	Social Impact Bond
SIDS	Small Island Developing States
TNC	The Nature Conservancy
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
USAID	United States Agency for International Development



# Sustainable financing and Large-Scale Marine Protected Areas



*Lunckia laevigata, blue sea star. © Great Barrier Reef*

## 1.1 The importance of Large-Scale Marine Protected Areas

The marine domain is vital to humanity's survival and must be protected and managed wisely. The world's oceans cover approximately seventy percent of the earth's surface and contain nearly all of the total water on earth. In Pacific Island nations, marine resources represent fifty to ninety percent of all animal protein in the diet, more than three to four times the global average (Pilling et al., 2015). However, the ocean's ability to provide these invaluable benefits to people is challenged by many threats such as pollution, climate change, overfishing, and unsustainable development (Noone et al., 2014). With calls for ocean protection mirroring the increase of environmental threats, countries must further scale-up conservation efforts for national, regional, and global benefit.

Marine protected areas (MPAs) are a critical tool in preventing biodiversity and habitat loss, and ensuring the sustainability of critical ocean resources. While small scale MPAs remain a key conservation tool, only well-managed Large-Scale MPAs (LSMPAs) can protect vast or interconnected ecosystems in their entirety. The total amount of ocean protected by all 16,908 MPAs globally is 28,188,975 square kilometers (km<sup>2</sup>), compared with the amount protected by the 20 largest sites at 17,573,997 km<sup>2</sup> (Protected Planet, 2019), demonstrating the globally significant contribution of LSMPAs to ocean protection. A recent report by the United Nations Environment Programme-World Conservation Monitoring Centre and IUCN (2019) notes that the ten largest MPAs currently comprise some seven percent of all global MPA coverage, highlighting that the sizeable increase in MPA coverage in the last ten years can be attributed to LSMPAs.

LSMPAs are also instrumental in meeting agreed on global conservation targets. In 2016, IUCN members and scientists issued a call to protect 30 percent of our global ocean (IUCN, 2016), which more than doubled the pre-existing Aichi Target of ten percent protection by 2020. This substantive call-to-action by leaders in the marine conservation field positions LSMPAs to be a vital tool for marine and whole domain management at-scale.

## 1.2 Sustainable financing

A growing body of evidence suggests that, in addition to key factors such as governance, management capacity, and stakeholder engagement, adequate finance is critical to long-term success of MPAs and other area-based conservation and management approaches (Bonham et al., 2014; Emerton et al., 2006). Indeed, one of the most frequently cited causes of conservation programs failing to achieve durable outcomes is a lack of sustained financing. Financial stability is necessary to ensure that on-the-ground practitioners can proactively plan for emerging threats to conservation, effectively recruit and deploy resources for monitoring and enforcement and conduct broad-based outreach and stakeholder engagement activities.

Yet, in the face of growing evidence of existential threats to the planet's health and greater calls for increased efforts to protect and sustainably manage nature, there is broad underinvestment in the conservation sector. A 2016 report estimated that annual global conservation needs of USD 300-400B compared with current annual investments of about USD 52B (Credit Suisse, WWF &

**Sustainable financing** is the ability to:

- 1) secure sufficient, stable, and long-term financial resources; and,
- 2) allocate these resources in a timely manner and in appropriate forms, to cover the costs necessary in order to meet effective and efficient management objectives (Bovarnick et al., 2010).

McKinsey, 2014). Due to poor availability and quality of data, there is no global estimate on the current funding available for MPAs; however, researchers and practitioners have sufficient evidence to demonstrate that marine ecosystems are particularly underfunded among the Protected Areas (PAs) as a whole (Bohorquez et al., 2019; Bos et al., 2014; Lennox, 2012; Lotze et al., 2011). A recent review of seven LSMPAs in IUCN's "Large-Scale Marine Protected Areas: Guidelines" found that financial constraints were cited by all but one LSMPA as one of their top two political or scientific challenges (Lewis et al., 2017). As the number of LSMPAs designated continues to increase around the world, sustainable financing will be more pertinent than ever before.

### 1.3 Challenges to LSMPA financing

With few exceptions, governance and management challenges faced by LSMPAs apply to all MPAs. Within LSMPAs, these challenges are inevitably magnified due to the size and scale of the area under protection. However, there are new and unique management challenges emerging associated with coordination across vast areas, management of highly dynamic seascapes, and complex interagency or even transnational coordination of LSMPAs (Ban et al., 2017). Table 1 presents key challenges faced by LSMPAs, as described first in the IUCN Best Practice Protected Area Series Vol. 26 *Large-Scale Marine Protected Areas: Guidelines for design and management* (Lewis et al., 2017). These amplified challenges often result in increased costs for LSMPA management.

To date, many efforts have been made to implement FMs within LSMPAs, some more successful than others. A more in-depth discussion on the literature surrounding LSMPA financing can be found in **Supplementary document 1: LSMPA financing literature review**.

Across the board, sustainable financing for LSMPAs remains challenging, and widespread examples of LSMPA's FMs remain limited for a number of reasons, including:

- The limited number of LSMPAs: only 35 exist to date.
- The nascent nature of LSMPA implementation: only four are older than 15 years.
- The massive scale of LSMPAs can amplify costs associated with large-scale monitoring and enforcement efforts as well as scientific exploration but also offers economies of scale.
- No one-size fits all: the diversity between and within LSMPAs make it hard to transfer lessons from a well-established, highly populated LSMPA to a new, more remote LSMPA.

- Uncertainty around actual costs: depending upon the amount of existing data prior to or at establishment, the site's location and accessibility, as well as the depth of management and scientific capacity in-country, budget calculations can be vastly different for sites of the same relative size.
- No specific guideline documents or best practices toolkits exist for LSMPA financing.
- Existing financing options do not address the more complex nature of LSMPA management and governance, which often requires collaboration between multiple jurisdictions and disparate government line offices.
- Challenges in acquiring financial support for projects that require much longer timeframes to produce results, as well as managing, often unrealistic, expectations created from outcomes at smaller scale MPAs.
- Unknown future management needs from increasing global threats, such as climate change.

This study takes stock of the current status of LSMPA financing and provides an in-depth discussion of the key challenges faced by LSMPAs in securing financing. This report aims to consolidate currently available material on LSMPAs, provide new insights where possible, and develop recommendations based on lessons learnt to advance the current state of knowledge on LSMPA financing, and further broaden the dialogue on LSMPA management and financing worldwide.

**Table 1:** Key challenges faced by LSMPA decision makers and managers (Lewis et al., 2017).

1. Governance
National jurisdictions may overlap or there may be conflicting legal mandates for neighbouring or transboundary LSMPAs.
Effectively and equitably addressing the full range of diverse stakeholders and all legitimate parties, especially Indigenous peoples and traditional or local communities, can be a challenge.*
2. Management
The amount of funding required can be significant.
Enforcement and surveillance can be costly and logistically challenging.
Finding qualified staff with skills and experiences relevant to large-scale MPAs can be difficult.
Political support can change from one political administration to another.
Acquiring and managing data requires a significant, long-term investment.
3. Social considerations
It may be difficult to showcase the contributions of LSMPAs to the social and economic well-being of communities and to highlight differential and secondary impacts of management on segments of the population; this is even more the case for remote areas.
Adequately supporting culturally related access and the perpetuation of key cultural practices and knowledge systems is essential.
Due to a higher public profile, large-scale MPAs can come under a great deal of public scrutiny, be affected by misinformation, and be held to a higher standard.
4. Research and monitoring
A lack of sufficient technical capacity and expertise often arises due to the sheer size of the area and number of priority research questions.
Specialised equipment and technology is costly.
It may be cost-prohibitive and logistically impractical to acquire sufficient sample sizes to characterise the entire MPA
The limited pool of research institutions in any single country can make developing science partnerships challenging, and engaging with international partners is costlier.
5. Cross-cutting issues
There is an inherent uncertainty involved in making informed management decisions.
Additional time and effort are required for nearly every management action.
Ongoing financial constraints are to be expected.
Multiple languages may be spoken.
Sometimes there are few comparable examples from which to derive lessons learned.

\*This is a key cross-cutting issue but successfully addressing this issue begins with a governance framework that supports managers in this endeavour.

# Background to this study



British Indian Ocean Territory MPA, Chagos Archipelago. © Ann Sheppard

## 2.1 Objective

As part of the Pacific Ocean Finance Program's (POFP)<sup>1</sup> effort to increase the amount and efficacy of financial investments into Pacific Ocean governance, this study evaluates the current financing landscape for LSMPAs and develops recommendations to improve existing financing and guidance for future financing of LSMPAs. The work crystallises lessons learned from the past two decades of LSMPA development. In doing so, this document assembles a set of findings that builds on and complements existing standards with the hope that this can be readily accessible by LSMPA practitioners, particularly by those active in the Pacific Islands region consistent with POFP focal countries.

## 2.2 Who we are

The research consortium consisting of Starling Resources, Conservation International (CI), and Big Ocean leveraged their experience and connections in support of the World Bank, which is the lead agency championing this work for their focus countries in the Pacific. All organisations utilised their experience with marine, coastal, and terrestrial PAs of all sizes throughout the Asia-Pacific region and the globe to ensure that this report met the best-practice standards for the design, management, and funding of MPAs.

### *Conservation International*

Building upon a strong foundation of science, partnership, and field demonstration, CI empowers societies to responsibly and sustainably care for nature, our global biodiversity, and for the well-being of people. Founded in 1987, CI is headquartered in the Washington, D.C. area and employs more than 800 staff in 30 countries on six continents, and has nearly 1,000 partners around the world.

### *Starling Resources*

Starling Resources is a Bali-based sustainability consulting and advisory practice. Starling Resources designs solutions to answer economic, social, and environmental concerns worldwide with a focus on the Asia-Pacific region. Since its inception in 2006, Starling Resources has worked with partners across the globe to design solutions that positively address some of the most urgent environmental issues. To date, Starling Resources has worked across ten countries and seven provinces in Indonesia. Starling Resources bridges the gap between business, the public sector, and civil society organisations, as well as between academic scholarship and on-the-ground experience. Starling Resources takes a holistic perspective and deploys business-minded tactics to deliver practical environmental solutions for our clients.

### *Big Ocean*

Big Ocean is the only peer-learning network created 'by managers for managers' (and managers in the making) of large-scale marine areas. Since its inception in 2010, Big Ocean's focus has consistently been to improve management and best practice, as well as grow the field of large-scale MPAs through the development and enhancement of the professional standards of practice. Big Ocean's premier publication *Large-Scale Marine Protected Areas: Guidelines for design and management*, was co-published with IUCN as volume 26 within its Best Practice

<sup>1</sup> The Pacific Ocean Finance Program (POFP) is funded by the World Bank and the Global Environment Facility, and is implemented through the Pacific Islands Forum Fisheries Agency (FFA) and the Pacific Islands Forum Secretariat (PIFS) - Office of the Pacific Ocean Commissioner (OPOC). The POFP is a three-year program with the aim to increase the amount and efficacy of financial investments into Pacific ocean governance, focusing on eleven countries: Solomon Islands, Vanuatu, Fiji, Tonga, Samoa, Kiribati, Nauru, Palau, Marshall Islands (RMI), Federated States of Micronesia (FSM) and Tuvalu.

## 2.3 Methodology

In producing this report, the team drew from their collective experience, merged this knowledge with the available literature, and, perhaps most critically, consulted with the full network of practitioners at each stage of the process. The research process was designed to provide salient and accurate findings and to make the associated recommendations actionable.

Our study produced three main outputs:

1. Literature review, assessment framework and profiling of LSMPA's FMs
2. LSMPA review and in-depth case studies, including methodology development, and cost modelling for one site
3. Guidelines and recommendations for practitioners

Due to the size and level of detail, the literature review and LSMPA case studies are provided as supplementary documents to this report. However, results of both documents are summarised and integrated in different sections of the report.

### 2.3.1 Literature review and framework development

The literature review included both grey and peer

reviewed material, case studies, standards and best practices, and other publications. It was primarily pulled from literature on MPA finance, but also included consulting literature more broadly focused on PA's development and management. The review provided a basis for developing our findings and guidelines later on and allowed us to identify existing gaps in the literature, enabling us to tailor the focus and depth of project outputs to best address such gaps. The full literature review can be found in **Supplementary document 1: LSMPA financing literature review**. This phase also included profiling of current and available FMs, further discussed in the section 3.3.

Based on the findings in the literature review, an assessment framework was developed. The framework serves as a guide to evaluate FMs, both in a Small Island Developing States (SIDS) setting and elsewhere, for existing as well as future LSMPAs. The Framework was used in this study to assess the FMs of the three in-depth LSMPA case studies and to structure the discussion on guidance and recommendations on LSMPA financing.

The framework is structured in nine areas of inquiry:

- Financial planning
- Setup and transaction costs
- Governance and participation
- Scale and timing of revenues
- Accessibility

- Durability
- Capacity requirements
- Contextual fit, relevance and adaptability
- Risks

For each of the areas of inquiry, a set of questions have been developed (**Annex 1: LSMPA finance framework**).

### 2.3.2 LSMPA review and in-depth case studies

The LSMPA review was divided into two sections: a desktop review of ten LSMPAs, followed by a more in-depth analysis of three LSMPAs. A rigorous methodology, involving two rounds of assessment, was developed to choose the relevant sites (which can be seen in **Supplementary document 2: Desktop review of ten LSMPAs**, including three in-depth case studies). The criteria developed, evaluates the sites according to their potential contributions to increase the learnings from the use of FMs specific to LSMPAs.

The ten LSMPAs reviewed and three LSMPAs in-depth case studies are outlined in Table 2.

The Desktop Review process began with one to three sites being assigned to each research team member. After an evaluation of available resources, plus in-person interviews of management staff and partners, a summary report for each of the ten LSMPAs was produced. A standardised questionnaire was used for the interviews, with the possibility to add site-specific questions for each LSMPA.

For the three in-depth case studies, the research team expanded upon the initial desktop review reports through more in-depth research. Team members also visited each site to conduct in-person interviews. These interviews aimed to address gaps in information and to help provide greater context for the data gathered during the desktop study phase. When appropriate and feasible, the research team also spoke with relevant partner agencies, non-profits and Non-Governmental Organisations (NGOs). This phase also included cost modelling for one of the in-depth case studies with the aim to provide deeper details in costs and revenue related to a particular LSMPA.

### 2.3.3 Guidelines and recommendations for practitioners

The final phase consisted of compiling all desk-based research, interviews and site visits in order to produce two different documents:

- Recommendations for improving the overall landscape for LSMPA finance; and
- Guidelines for practitioners, which builds on the assessment of existing literature and the Assessment Framework (developed for this report) to ensure a comprehensive assessment of all issues critical to successful LSMPA financing.



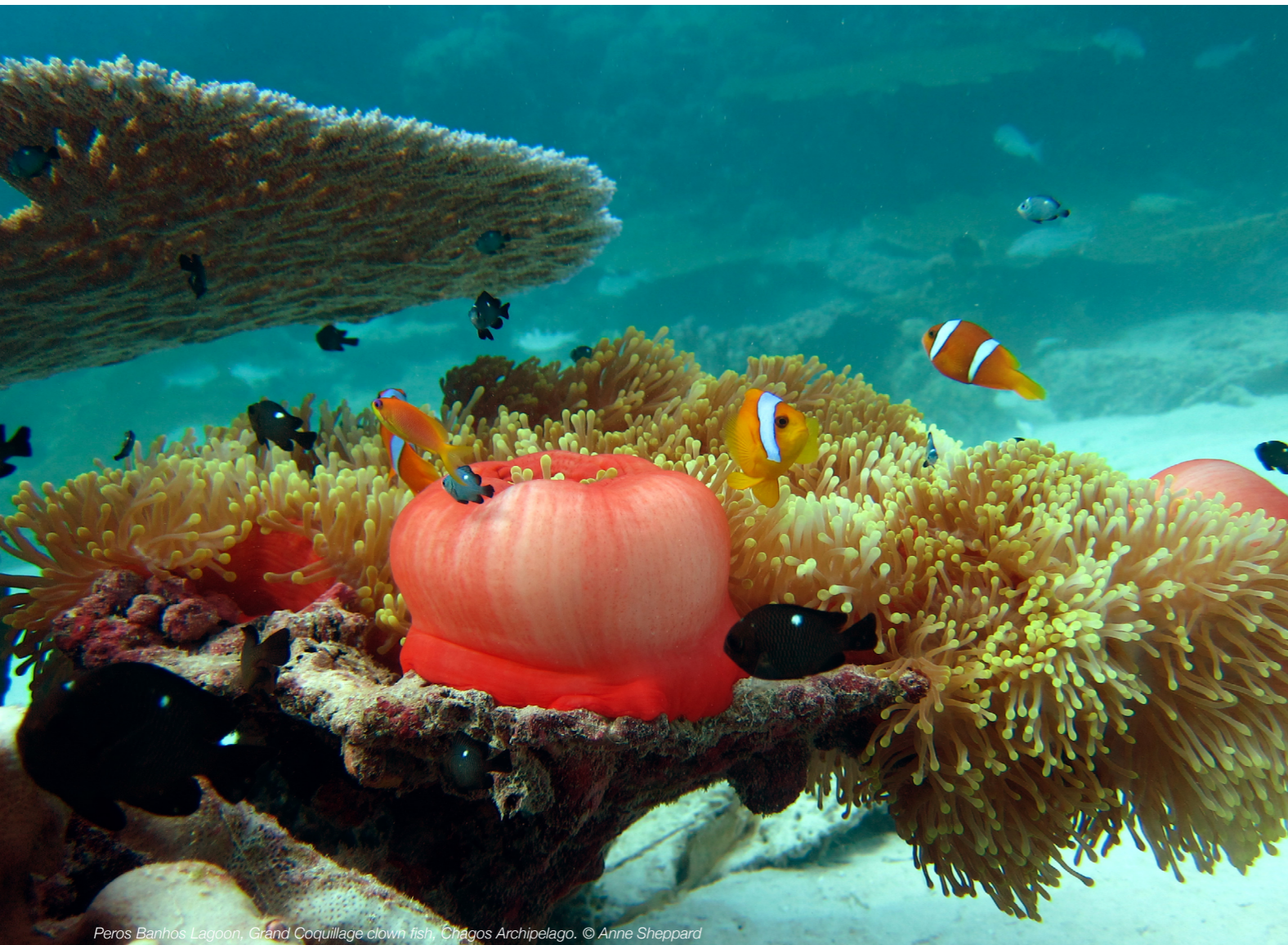
Various species of butterfly fish, Papahānaumokuākea. © Greg McFall

**Table 2:** LSMPAs included in the Desktop Review and in-depth Case Studies (presented chronologically by year established; site names in bold italics denote in-depth Case Study sites).

1	<b>Great Barrier Reef Marine Park (GBRMP) (Australia)</b>
2	Galapagos Marine Reserve (GMR) (Ecuador)
3	Papahānaumokuākea Marine National Monument (PMNM) (USA)
4	<b>Raja Ampat MPA Network (RAMPAN) (Indonesia) <sup>2</sup></b>
5	Phoenix Islands Protected Area (PIPA) (Kiribati)
6	Motu Motiro Hiva Marine Park & Rapa Nui Multiple-Uses MPA (MMHMP & RAPA-MUMPA) (Chile)
7	Le parc naturel de la mer Corail or the Natural Park of the Coral Sea (NPCS) (France)
8	<b>Palau National Marine Sanctuary (PNMS) (Palau)</b>
9	Pacifico Mexicano Profundo Biosphere Reserve (PMPBR) (Mexico)
10	Marae Moana Marine Park (MMMP) (Cook Islands)

<sup>2</sup> Although Raja Ampat Marine Protected Area Network (RAMPAN) is not a singular LSMPA, collectively, the network is large, and could be seen as similar to a serial-site LSMPA (i.e., Pacifico Mexico Profundo Biosphere Reserve). Its management regime also has a significant amount of experience using a few mechanisms, which could be beneficial to the genre of LSMPAs.

# Current seascape of financing at-scale



Peros Banhos Lagoon, Grand Coquillage clown fish, Chagos Archipelago. © Anne Sheppard

## 3.1 Introduction

Financial planning and management for conservation is now a 30-year old discipline, born from the recognition that the success of nature conservation efforts, such as PA's development and management, is often predicated on adequate funding and financial management and that such initiatives compete with other public goods and services for limited budgetary resources.

In the past two decades, responding to the global debate about climate change and environmental issues, private sector investments have increasingly found their way into the conservation agenda, triggering the development of new, innovative FMs to harness the new flow of capital (Credit Suisse, WWF & McKinsey, 2014). This represents a potential opportunity to scale up financing for nature conservation, including LSMPAs. The emergence of such market-based mechanisms compliments, but does not decrease, the importance of more traditional non-market mechanisms such as government budget allocations, Official Development Assistance (ODA), and philanthropy.<sup>3</sup> An important study estimated that non-market mechanisms such as ODA and philanthropy have the potential to provide up to 50 percent of all conservation finance needed (Parker et al., 2012).

The context and characteristics of LSMPAs vary greatly from site to site, defying easy categorisation and prohibiting uniform prescriptions for financing models that can successfully support conservation efforts at all sites. GBRMP in Australia and the Phoenix Islands Protected Area (PIPA) in Kiribati, for example, are characterised by an entirely different set of factors, and effective financing strategies for these sites would likewise diverge significantly. However, there are some characteristics that are common to many LSMPAs that should be considered in any assessment of potential FMs.

One characteristic common to all LSMPAs is their size: LSMPAs must grapple with the challenges of developing effective approaches to conservation across a wide geographic area. LSMPA's FMs must be capable of generating funding on a scale relevant to such conservation efforts. This can be juxtaposed to community-based, or smaller, near-shore conservation efforts, where FMs that generate only minimal financing can be meaningful. Due to their size, LSMPAs also often cross jurisdictional boundaries – governance, finance and other aspects of LSMPA management are often relevant at a national scale. Many LSMPAs may be in remote locations, creating challenges for any FM that relies on frequent access, such as tourism-based fees. Finally, for a variety of reasons, including high levels of biodiversity in tropical countries, many LSMPAs are located within developing and emerging economies. This can compromise the potential for public budget allocations to support LSMPA management – a critical source of funding for LSMPAs and conservation work more broadly – as these countries focus limited resources on economic development, health, and other services, such as disaster management and recovery. These factors, among others, inform the discussion of FMs that follows below.

## 3.2 Classification of financing mechanisms

A number of frameworks have been developed to better understand and facilitate effective financing for nature conservation and protection. The Biodiversity Finance Initiative (BIOFIN) framework is, perhaps, the most visible of these. Initiated by United Nations Development Programme (UNDP), BIOFIN is an initiative to develop a new methodological framework to aid in generating financing needed to meet global and national biodiversity goals (UNDP, 2018).

<sup>3</sup> We echo Iyer et al. (2018) in the use of "traditional" to refer to government and donor sources of funding for conservation and their continued primacy in this role into the future.

The BIOFIN framework defines financing instruments or mechanisms as approaches “used to mobilize, collect, manage, and disburse” funding, and puts these in a broader context of a “finance solution” which includes the funding source, lead agent, instrument or mechanism, financing results, and beneficiaries or principal stakeholders (see **Supplementary document 1: LSMPA financing literature review**). The BIOFIN framework identifies six categories of instruments or mechanisms:

- **Grants:** any solution that involves the allocation of a grant, which includes private donations and ODA.
- **Debt/equity:** any solution that consists of an obligation or liability to make a payment and possibly the acquisition of ownership rights (equity, property, or financial asset).
- **Risk management:** any solution that involves the transfer of risks between two or more parties, a guarantee.
- **Fiscal:** any solution that involves a fiscal reform, i.e., changes in taxation or the modification of a subsidy’s regime.
- **Market:** any solution that involves a market transaction, Ecosystem Services (ES) and carbon markets.
- **Regulatory:** any solution that involves a regulatory reform, i.e., the imposition of a certain behaviour through the law or a regulation.

The BIOFIN framework is comprehensive in nature and the website<sup>4</sup> presents 68 “mechanisms or finance solutions,” each of which is placed in the above classification. BIOFIN is a multi-lateral initiative and takes a national-level perspective, prescribing methodological tools and approaches that can be deployed to assess needs and develop biodiversity financing solutions at the country-level.

The Conservation Finance Alliance’s (CFA) Conservation Finance: A Framework (2020) builds on and adapts the BIOFIN classification, presenting seven categories of conservation finance “strategies and mechanisms”:

- Grants and Other transfers
- Return-Based Investments
- Risk Management
- Public Financial Management
- Business and Markets

- Economic Instruments
- Financial Efficiency

The CFA framework further identifies several subcategories for each for a total of 34 mechanisms or strategies.

In their Finance Tools for Coral Reef Conservation, Iyer et. al., (2018) acknowledge that the list of potential financing options can be “overwhelming.” They assess a subset of FMs of particular relevance to conservation activities. Their approach is more aligned with a project-based method.

Our approach most closely resembles Iyer et al. (2018). We likewise select mechanisms most relevant to the LSMPA context and provide brief comments on how these may fare in the LSMPA context. For the purposes of consistency, we also aim to place these into the BIOFIN and CFA frameworks. It should be noted, however, that FMs as commonly discussed can occupy a number of categories and places along the financing solution chain as defined by BIOFIN. Government budget allocations can be used to capture both the financing source (government budgets) and the mechanism (budget allocations), while a CTF can be viewed as a FM by financial planners, but also as a financing source by field-based recipients.

The Table 3 below places each of the selected mechanisms in the BIOFIN framework.

### 3.3 Financing mechanism profiles

The following section outlines several relevant FMs that could be applied to LSMPAs. Several of these are tested and proven, and others are more recent innovations with little track record. Each FM is described according to its strengths and weaknesses and assessed according to six criteria that were developed based on the findings from the literature review in this study (**Supplementary document 1: LSMPAs financing literature review**). Further details on the development of the criteria development can also be found in **Annex 2: Financing mechanisms criteria development**.

- **Scale:** The distinguishing characteristic of LSMPAs is size, with most sites spanning thousands of square kilometres of open ocean habitat. These sites are often large enough to encompass entire marine ecosystems. In assessing FMs, consideration should be given to whether a mechanism can generate financing on a scale relevant to LSMPAs.
- **Contextual adaptability:** Many LSMPAs are

noted for their remoteness and low human population density. Other LSMPAs span most, or all of a country’s EEZ, inclusive of numerous marine activities (e.g. fishing) and significant human populations. Given this diversity, the ability of a FM to adapt to different LSMPA contexts should be assessed.

- **Ease of implementation:** Across the spectrum of FMs, there is considerable variance regarding the technical inputs required to enact a mechanism. This may include potential need for political support, stakeholder engagement, new regulation(s), technical expertise, etc. Consideration should be given to the complexity involved in design and execution of the various FMs, as well as the relative ease of accessing the funds generated by the FM.
- **Cost of implementation:** FMs can vary widely in the costs required for establishment and operation. Costs to be taken into account include the hiring of specialised services, such as financial advisors, transaction costs, and other miscellaneous costs associated with FM establishment, operation and maintenance.

- **Flexible use of funds:** LSMPAs generally require a broad array of expenditure types to achieve management effectiveness (personnel, equipment, communications, etc.). Limitations on use of funds may be common to certain FMs or funding sources which can prevent the effective deployment of funds to meet critical conservation needs. FMs may also be prone to risks in the flow of funds, as well as other risk factors, such as diversion of funds to serve political interests. Greater flexibility in the potential use of funds and greater insulation against fund diversion improves the effectiveness of the FM.
- **Sustainability:** Consideration should be given to the overall security and longevity of funding generated by a FM, its ability to provide financial support over long time horizons, and susceptibility to external risks such as economic shocks or political instability.

A summary of the assessment of each FM against the above criteria is presented in the matrix below (Table 4). A green colour indicates that the FM scores well on the criterion in question; yellow indicates a neutral score and red indicates a weak score:<sup>5</sup>

**Table 3.** Selected financing mechanisms as they relate to the BIOFIN framework.

Financing mechanisms	Financing instruments					
	Grant	Debt/Equity	Risk Mgmt.	Fiscal	Market	Regulatory
Mobilisation of public budget allocations				○		○
Private & philanthropic grants	○					
Mobilisation of Official Development Assistance	○	○				
Conservation Trust Funds	○				○	○
Dept-for-Nature Swap	○	○				
Environmental resilience and social impact bonds	○	○			○	
Impact investing and conservation enterprise incubators	○	○			○	
Insurance solutions			○			○
Green/Blue taxes				○		○
Payment for Ecosystem Services					○	○
User fees					○	○
Biodiversity and carbon offsets					○	○

<sup>4</sup> <https://www.biodiversityfinance.net/finance-solutions>

### 3.3.1 Mobilisation of public budget allocations

Governments have traditionally been the main financier for conservation initiatives, though this funding remains low as a share of overall government spending. For some 40 countries, between 2002 and 2010, environmental expenditures accounted for 0.2 percent of government expenditure (CBD, 2011). As awareness of the ES provided by the environment and the importance of preserving those systems has grown globally, governments have increased their budgetary allocations accordingly and government budget allocations continue to be the single-most important source of funding available to support LSMPAs (Iyer et al., 2018).

Direct budget allocations for marine conservation projects come from central or local/municipal government budgets and can be sourced from taxes, levies, fees, fines, government managed companies and other regulated or mandatory revenue streams. Typically, a government finance-related agency or body, such as a Ministry of Finance, manages and allocates the funds to the government agencies or organisations responsible for conservation (JNCC, 2017). Public budgeting processes can be complex and time-consuming; however, these are established processes, part of regular public sector operations, that conservation practitioners can leverage. Conservation managers may need to invest heavily in ensuring that

these allocations grow, or at least remain stable over time. Public budget allocations can be susceptible to changes in a country's political environment and economic conditions.

Strengths and weaknesses:

- **Scale:** May be capable of large-scale financing as needed for LSMPA establishment and operations, though this may be limited in a low-income country context.
- **Contextual adaptability:** Public budget allocations are a ubiquitous feature of all LSMPAs and have been adapted to a wide array of LSMPA contexts.
- **Ease of implementation:** As an ongoing public sector process, required technical and specialised expertise is limited to basic knowledge of public sector and conservation budgeting. However, significant effort may be required to navigate the legal, administrative and political challenges that can create obstacles to efficient delivery of funds.
- **Cost of implementation:** Public sector budgeting and funding allocation processes are a normal part of government operations and no additional costs should be incurred outside of the time and effort required to work with government partners to ensure effective allocation.
- **Flexible use of funds:** Government funding is subject to certain regulatory guidelines and oversight and is generally only available to support government activities and entities; regulatory measures often prescribe how and where funds can be spent, and on what conservation measures or targets. Public budget allocations normally prioritise coverage for core operations (labour, fuel, equipment, supplies, etc). These allocations would be less likely to cover activity-based costs, such as staff training, communications, planning, etc.
- **Sustainability:** Despite being at the mercy of fluctuations in economic conditions and political will, government budget allocations remain a relatively stable source of long-term funding and continue to be the most important resource in an LSMPA context.

example), or NGOs (JNCC, 2017). Grants can provide direct funding to conservation areas; these funds can be channelled directly to a conservation management agency (government), but usually these contributions are channelled to NGOs that are actively partnering with government in LSMPA conservation efforts. The scale or target of funding can vary, depending on donor capacity and interests. In the past decade, there has been a significant increase in the number of US and European private foundations that actively support large-scale ocean protection efforts.

Strengths and weaknesses:

- **Scale:** There are few private donors capable of independently providing funds on a scale equivalent to typical LSMPA costs. More frequently, when acting independently, private donors may support specific activities that may focus on catalysing growth and development or provide important supplementary support to LSMPAs. However, some donors, particularly when acting together (for example through a CTF), may be capable of supporting a significant share of LSMPA costs.
- **Contextual adaptability:** Private donors are free to support LSMPAs across a variety of contexts, within the prevailing legal limits of host countries.
- **Ease of implementation:** Private donors have tailored policies/procedures for accessing funds which are generally less complex when compared to the processes of accessing financing from other sources or mechanisms. Private funders often develop longer term relationships with sites, initiatives and organisations which can facilitate ease of access, transparency and long-term planning.
- **Cost of implementation:** There are costs involved in identifying/cultivating private donors, applying for grant funding and reporting on use of funds, though here again, these may be limited compared to those of accessing or developing other funding sources or mechanisms.
- **Flexible use of funds:** Private donors are free to set funding objectives and permissible uses as they see fit, within prevailing legal limitations. Many donors do not (or are not able to) support governments directly, and these funds are usually channelled through civil society partners. Funds are often used to support key aspects of an overall LSMPA management program (e.g. surveillance activities, monitoring efforts) that respond to the priorities of a particular donor.
- **Sustainability:** Private donations are usually contributed as time-bound project grants.

**Table 4:** Financing Mechanisms assessed according to each criterion

	Scale	Adaptability	Ease of implementation	Cost of implementation	Flexible use of funds	Sustainability
Mobilisation of public budget allocations	high	medium	medium	medium	medium	high
Private & philanthropic grants	medium	high	high	medium	high	medium
Mobilisation of Official Development Assistance	high	medium	medium	medium	medium	medium
Conservation Trust Funds	medium	high	low	high	high	high
Debt-for-nature swaps	high	high	low	high	medium	medium
Environmental resilience and social impact bonds	medium	medium	low	high	medium	medium
Impact Investing and Conservation Enterprise Incubators	low	medium	medium	medium	low	low
Insurance solutions	medium	low	low	medium	low	medium
Green/Blue taxes	medium	high	medium	medium	medium	medium
Payment for Ecosystem Services	low	medium	low	medium	medium	medium
User fees	high	medium	medium	medium	medium	high
Biodiversity and carbon offsets	medium	medium	low	medium	medium	medium

<sup>5</sup> The matrix is to be used as a general comparison tool only, as it does not reflect contextual considerations, and thus does not represent a recommendation for certain financing mechanisms to be used.

### 3.3.2 Private and philanthropic grants

Private and philanthropic grants are another key source of direct finance for conservation activities. Philanthropic grants can also be used as a source of funds to incubate/establish new FMs, such as a CTF (Section 3.3.4). Private grants and donations can come from a variety of sources: high-net-worth individuals, foundations, companies (through their corporate social responsibility programmes, for

Some private donors may issue multiple grants over time to a site and donors may develop long-term commitments to a site or initiative. However, such priorities can change and direct private donations are generally not considered a sustainable source of funding. Private donations can be channelled through a CTF mechanism which can greatly increase long-term sustainability.

### 3.3.3 Mobilisation of Official Development Assistance

The definition of ODA is ‘government aid that promotes and specifically targets the economic development and welfare of developing countries’ (OECD, 2019). Official agencies, including state and local governments or their executive agencies, channel aid to awarded programmes and projects overseas (directly or indirectly) through accredited agencies, private companies, and civil society organisations. Although the most common disbursement is grant financing, funding may come in a variety of forms, including concessional loans, guarantees and equity (UNDP, 2017b).

ODA funding relevant to LSMPA financing is frequently delivered through aid-related government agencies, such as the United States Agency for International Development (USAID) or the UK’s Department for International Development (DFID), among many others. Significant ODA funding for biodiversity and environmental initiatives also comes through multilateral channels such as the World Bank and the United Nations. The Green Climate Fund (GCF), for example, is an initiative within the United Nations Framework Convention on Climate Change (UNFCCC) and has committed more than USD 5.3B<sup>6</sup> for projects that help reduce greenhouse gasses, while the Global Environment Facility (GEF), an independent organisation, has provided roughly USD 20.5B in grants, channelled from 183 countries, to help tackle “the world’s most pressing environmental problems.” Other public funding agencies have funding windows that are focused on marine protection at national/regional scale (KfW Development Bank’s Blue Action Fund, GEF’s International Waters Programme). Together, these and other ODA initiatives account for around 12 percent (USD 6.3B) of public financing for biodiversity today (UNDP, 2018). Most of this is channelled towards terrestrial and freshwater biodiversity while only a small fraction is allocated to the conservation and sustainable use of marine biodiversity. According to the Organisation for Economic Co-operation and Development (OECD), around 4 percent (USD 360M) of bilateral and 9 percent (USD 63M) of multilateral ODA targets marine biodiversity each year as a principal or significant objective (OECD, 2020).

- **Scale:** Good potential for generating funds at scale with LSMPA funding needs, depending on donor agency.
- **Contextual adaptability:** ODA funds can generally be used for variety of LSMPA conservation targets, objectives and activities. These agencies often have rigorous social safeguard protocols that apply when human populations are present.
- **Ease of implementation:** Most public funding grants entail rigorous and lengthy applications processes and cumbersome reporting requirements, as well as rigorous policies/procedures that must be followed during project execution.
- **Cost of implementation:** There are costs associated with accessing such ODA funds, outside of the time and effort required to comply with application and reporting requirement, which are generally more intensive and complex than private grant funds.
- **Flexible use of funds:** Funds are often tied to targets defined by the donor agency or its members. Additionally, most bilateral/multilateral support must be clearly aligned and supportive of relevant country-level policies/programs related to environment and conservation. Although funds can generally be used to support a wide range of LSMPA objectives, some donor agencies have particular restrictions on expenditures (e.g. construction/repair of infrastructure).
- **Sustainability:** Most funding is project-based, though some funding can be channelled into other LSMPA FMs such as CTFs.

### 3.3.4 Conservation Trust Funds

As private, legally independent mechanisms, CTFs typically manage a pool of financial assets (investment portfolio) aiming to generate a financial return in order to sustainably finance the implementation of conservation programmes. Most CTFs deliver their funding in the form of grants to various conservation programmes. CTFs are most often established to finance the recurrent costs of operating PAs. There are currently over 80 CTFs worldwide, either active or in some stage of development. Most CTFs are managed by non-governmental, independent boards, but include government participation on their boards. CTF programs are usually closely aligned with government programs and priorities.

CTFs can channel money from a wide variety of sources, most typically philanthropic donations and ODA funding. CTFs can utilize a variety of structures

in managing funds: ‘Endowment Funds,’ in which the principal fund is maintained indefinitely, ‘Sinking Funds’ in which funding is gradually expended, or ‘Revolving Funds’ in which funding is continually replenished as it is expended. Each fund type has implications for how funds are invested, managed, invested and distributed. CTFs typically use a portion of the funds under management to support the CTF’s own operating costs, in addition to those primary distributions to programmatic beneficiaries (JNCC, 2017).

Strengths & weaknesses:

- **Scale:** The ability of CTFs to provide funding at scale is dependent on the size of assets under management. Successful CTFs have benefitted from significant long-term fundraising efforts and are able to distribute millions of dollars annually, providing critical funding support in an LSMPA context.
- **Contextual adaptability:** There are several successful examples of CTFs across a variety of marine/LSMPA settings.
- **Ease of implementation:** Setting up a CTF requires specific legal and financial expertise as well as broad stakeholder engagement at the local, national and likely international level. A carefully designed governance and organisational structure will be needed in conjunction with a major fundraising effort to capitalise the CTF. For these reasons, the set-up process often takes three years or more.
- **Cost of implementation:** Relatively costly to set-up and operate due to need for external service providers (e.g. qualified investment manager), additional organisational structures, external expertise and upfront investment in fundraising.
- **Flexible use of funds:** Funding allocations from CTFs are usually guided by governance documents/strategic plans which are written at inception. These documents must consider a variety of factors, including conservation priorities and priorities of the contributing donors, but otherwise can be highly flexible in the deployment of funds.
- **Sustainability:** Most CTFs have an endowment fund which is meant to be managed in perpetuity. However, as CTFs do not generate revenue until they are sufficiently capitalised. This requires significant up-front fundraising and resource mobilization efforts.

### 3.3.5 Debt-for-nature swaps

In a Debt-for-nature swap (DNS), the sovereign debt of a country is partially or fully forgiven by its creditors and in exchange the debtor government commits

to investing the accrued savings in conservation or climate related expenditures or both.

DNS can be categorised as either public/bilateral swaps or private/commercial swaps (also known as third-party swaps):

- A bilateral DNS is negotiated between the creditor and debtor government in exchange for conservation activities in the debtor country.
- A commercial DNS typically involves a commercial creditor and a third-party donor. It can also include official creditors, making deals of a hybrid type. The donor, most often a conservation organisation, agrees to buy a part of the indebted country’s debt at a reduced value (UNDP, 2017).

Both types of DNS models have been utilised to financially support nature conservation and PA management activities, but bilateral (government-to-government) DNS are more common, largely implemented by the US Government entering into DNS swaps with debtor countries.

The majority of these DNS transactions were completed in the 1990s; however, there is renewed interest with DNS mechanisms to help countries achieve their global pledges on climate financing goals (UNDP, 2017) and ‘green’ economic recovery plans stemming from the COVID-19 crisis.

Strengths & weaknesses:

- **Scale:** Depending on the size of the debt forgiven, DNS can generate significant funding for LSMPA conservation objectives and

#### The SeyCCAT debt-for-adaptation-swap:

The first ever debt-for-adaptation-swap was structured by the Government of the Seychelles, its Paris Club creditors, the Seychelles Conservation and Climate Adaptation Trust (SeyCCAT) and The Nature Conservancy (TNC)’s NatureVest. Under the scheme The Seychelles government used private philanthropic funding and loan capital raised by NatureVest to buy back USD 21.6M of its sovereign debt at a discount. The government repays the loan to the local trust SeyCCAT, who in return repays the USD 15.2M in loan capital over ten years. Over a 20-year period, SeyCCAT will use USD 5.6M to support the implementation of Marine Spatial Plan in the Seychelles’ Exclusive Economic Zone as well as the establishment of a MPA of 400,000 km<sup>2</sup> (TNC, 2019; The Economist Group, 2020).

<sup>6</sup> <https://www.greenclimate.fund/#> accessed on July 28th 2020



Next generation navigators sailing in the waters of Papahānaumokuākea. © NOAA

activities. The government-to-government nature of bilateral DNS may fit well with LSMPAs which, due to their scale, are established and managed at a national level.

- **Contextual adaptability:** If the host LSMPA country has an attractive/eligible debt profile, the FM can be highly adaptable and a DNS can generate targeted funding for conservation; however, DNS transactions are usually only applicable to developing country contexts.
- **Ease of implementation:** Requires extensive negotiations between creditor and debtor and broad-based political support in the debtor/creditor countries to reassign debt payments to support in-country conservation programs.
- **Cost of implementation:** For commercial DNS, large amount of upfront capital must be raised by the third-party actor to purchase the debt and set up the swap. Most public DNS are funded by existing government budget allocations. An independent FM (e.g. trust fund) is usually required to manage/administer the debt swap proceeds, which also has an ongoing cost.

- **Flexible use of funds:** The DNS must target the conservation outcomes agreed between creditor or an intermediary NGO and the debtor. The actual proceeds from the DNS transaction are usually flexible and can cover a broad menu of conservation programs.
- **Sustainability:** DNS are usually 'one-time' transactions and the proceeds are generally spent down over a determined time-period. However, given the magnitude of funds involved and long-term payment schedules, they can provide a stable source of long-term financing for conservation.

### 3.3.6 Environmental, resilience and social Impact bonds

A bond is a type of FM used to raise debt financing from investors. The borrower then pays back the bond according to a predetermined schedule, with the addition of an interest payment. Governments can issue bonds to raise money for a wide variety of purposes. In recent years, some governments, corporations and international financial institutions, (e.g. World Bank) have issued green or environmental bonds, the proceeds of which are used for environmental sustainability efforts or initiatives. In

general, the proceeds from environmental bonds have been used to invest in 'green' projects that yield positive environmental benefits as well as positive cashflows. These types of environmental bonds have become increasingly attractive to 'impact investors' who seek to invest capital into FMs that yield positive environmental benefits as well as positive financial returns.

**Environmental bonds** are also referred to as 'green', 'blue' or 'climate' bonds as they target specific conservation or environmental projects related to either terrestrial, marine or climate change adaptation and mitigation. Certification by a third-party is a requirement of both the labelled green bond and climate bond standards. In recent years the number of conservation/climate bond market has grown significantly, in particular blue bonds (Thiele & Gerber, 2017).

**Resilience bonds** are similar to environmental bonds, but use the proceeds from the bond investors to fund restoration of natural structures (e.g. mangrove forests) that help reduce the impact of a natural disaster (flooding of mangroves) (Menendez et al., 2018).

Strengths & weaknesses:

- **Scale:** If a bond is issued by a sovereign state with the explicit purpose of raising capital for marine conservation and management (e.g. blue bonds), the amount of funding raised can be quite substantial.
- **Contextual adaptability:** Bonds can be designed to fund a broad array of conservation activities; however, a key premise behind blue/green bonds is that the proceeds will support activities that generate positive cashflows, which will allow the bond issuer (e.g. a country government) to repay investors. Some LSMPA contexts include sustainable fisheries, sustainable coastal development (e.g. ecotourism), and bond proceeds could support growth in these activities. Bonds would be a less likely FM in the case of remote, fully protected LSMPAs. Also, countries with a poor credit rating would have challenges finding bond investors.
- **Ease of implementation:** Bonds are complex and require significant technical expertise. The relevant actors must be identified and engaged (i.e. the government if a sovereign bond, private investors, or development banks). For some bonds, projects require well-defined performance indicators for reporting on FMs to ensure investor confidence. Lack of experience on behalf of the purchaser of the bond, combined with small project sizes, often means low trust and interest amongst investors.

**The Seychelles Blue Bond:** In 2018, the Republic of Seychelles launched the world's first sovereign blue bond, raising a total of USD 15M to advance the small island state's blue economy. The USD 15M from the World Bank is coupled with an additional USD 10M of funding from the GEF and the International Bank for Reconstruction and Development (IBRD). The SeyCCAT and the Development Bank of the Seychelles will co-manage the funds. The funds will be used to finance the implementation of the national fisheries programme which aims to promote a healthy and sustainable fishing industry, thus generating increased tax revenue, and the ability to repay the bond.

- **Cost of implementation:** There are substantial upfront costs involved in the design and issuance of the bond, and substantial costs associated with managing the bond proceeds and impact monitoring.
- **Flexible use of funds:** Bonds can be structured to support a broad menu of conservation activities, but the mix of activities supported would likely need to include some 'revenue-positive' activities to attract investment.
- **Sustainability:** Although bonds may be a 'one-time' investment, the activities supported can generate long-term environmental and economic benefits.

### 3.3.7 Impact investing and conservation enterprise incubators

Impact investing is a FM that is becoming more widely applied to support conservation and sustainable use of natural resources. Impact investing refers to investments that are made into companies, organisations, and funds with the intention to generate a measurable social or environmental impact alongside a financial return. Several impact investment vehicles now exist, with some focused specifically on blue economy investments (e.g. fisheries, aquaculture, seafood supply chains, sustainable tourism, ocean waste & recycling, etc). Althelia Funds is one example (see box). Impact investments are frequently made by directly financing an eco-business that has potential to generate long-term sustainable returns.

**Impact investors** could be philanthropic foundations, multilateral organisations, financial institutions, high net worth individuals, pension funds, insurance companies, and investment funds (Iyer et al., 2018).

Another growing industry in the space of return-based investments is the field of **conservation enterprise incubators** (accelerators). An enterprise incubator provides concessional loans or grants, and

potentially technical support, to newly established commercial ventures focused on conservation-based business models. The support is provided until the point of business viability or follow-on funding. Enterprise incubators are particularly relevant in developing countries, where newly established commercial ventures typically face a multitude of start-up challenges such as limited start-up capital, a location far from established markets, and a lack of robust accounting system and services. By helping to access capital markets, mobilise funds and providing technical expertise, enterprise incubators can play a critical role in jumpstarting these types of businesses.

Return-based investments represent a new development in financing for conservation. Successful conservation-based businesses may provide financial support to LSMSPAs in a variety of ways - through permit and licensing fees, in-kind support to conservation activities, or through specialised profit-sharing models. While specialised financing and support from incubators or impact investors may help to grow this sector and indirectly support conservation initiatives, this funding stream does not typically support conservation activities directly.

Strengths & weaknesses:

- **Scale:** Private investors generally invest in conservation businesses directly, as opposed to conservation efforts directly, so revenue potential is limited.
- **Contextual adaptability:** In LSMSPA settings, there would need to be profitable activities (e.g. tourism, fisheries) that could support business ventures, and many LSMSPAs do not support these conditions. Additionally, many developing countries have significant structural barriers that hinder the ease of doing business and may make attracting investors difficult.

**Althelia Funds:** Althelia Funds is an asset manager that manages investments into projects that are aligned with the conservation of nature and sustainable social development, and also generate a financial return. One of the Althelia Funds is the Sustainable Ocean Fund, which provides growth capital to companies that harness the ocean's natural capital sectors such as sustainable seafood, the circular economy and conservation focussed businesses. Based on a fundraise of USD 100M the Fund aims to structure and invest in 15-20 sustainable marine projects over the next coming years (Althelia Funds, 2020).

- **Ease of implementation:** Extensive negotiations and deal-structuring is necessary to unlock private investment. The potential for external private investment in a business is impacted by the ease of doing business in the country of operations.
- **Cost of implementation:** It requires significant upfront capital and resources to establish a viable eco-business that can attract incubator funds and impact investments.
- **Flexible use of funds:** Most enterprise incubators and impact investment vehicles support a broad menu of geographic and thematic business opportunities, but these types of funds generally do not support core LSMSPA conservation costs.
- **Sustainability:** Private investment can help eco-businesses achieve long-term viability, but this does not directly translate to long-term financing support for LSMSPA core costs.

### 3.3.8 Insurance solutions

Insurance, whereby a policyholder pays a premium to an insurance company in return for financial protection against a risk, is a new concept in conservation. The insurance policy can be parametric-based, which means it pays out if a pre-determined trigger occurs, or indemnity-based, which provides compensation for actual or potential losses or damages suffered.

There are many avenues to incorporating insurance as an element in conservation. One approach recognises the critical role of natural capital in the economic development of a given area (e.g. revenue from reef-based tourism), and directly insures these assets. This approach has been utilised in Quintana Roo, Mexico, where payouts from the insurance policy can be used to restore damaged reef areas (see box).

Another approach takes account of the role that blue/green infrastructure (e.g. coral reefs and mangroves) plays in lowering the risk of storm surge and flooding for coastal properties and other assets. In this model, conservation and restoration efforts are reflected in insurance premium pricing, with savings used to restore and protect the natural assets in question. This idea remains at the concept stage only and is yet to be piloted at scale.

The use of insurance instruments can likely only be applied in an LSMSPA that meets very specific criteria (e.g. willing buyers, providers, established insurance industry etc.), and these schemes are not likely to be a viable source of long-term financing to support LSMSPA operating costs.

Strengths & weaknesses:

**Quintana Roo in Mexico:** TNC recently partnered with the government and the science community to launch an insurance scheme in the state of Quintana Roo, Mexico, which forms part of the Mesoamerican Reef Region (MAR) Fund. Under the scheme, a Coastal Zone Management Trust will restore the reef on the coast, funded by payments from the tourism industry and the Rockefeller Foundation. The Trust will also purchase an insurance policy. The central idea is that the coral reef plays an essential part in the region's income from tourism (USD 10M in 2018) and that any harm to the reef would result in a loss of income. Under the insurance scheme, the Trust will purchase insurance to cover for any weather-related event that can harm the reef. The scheme is structured on a parametric basis, with a wind speed trigger of 100 knots. Any payout for reef damage from the reinsurer Swiss Re goes directly into the Fund to support any reef restoration effort (TNC, 2018).

- **Scale:** The potential amount of funding depends on the insurance structure and role of natural capital (e.g. whether the natural capital is itself insured, or whether it is protected and its value embedded into insurance premium prices). If the natural capital is itself insured, the insurance solution has the potential to pay out significant funds, albeit relative to the severity of the event. In the lower-premium model, the amount of funding will depend on the premium discount that can be achieved.
- **Contextual adaptability:** If properly set up, insurance schemes can be applied to a variety of settings. There are however a number of site-level condition/requirements that must be in place in order for a viable insurance product to be designed, for example the presence of green/blue infrastructure and businesses willing to pay for the services they provide, a mature insurance industry, etc. These conditions are not in place in many remote LSMSPA contexts.
- **Ease of implementation:** Insurance schemes require significant and specialised expertise. A wide range of stakeholders are needed to develop and launch the scheme: policyholders, government departments, insurance industry players, and local insurance associations. Product development is complex and includes risk modelling, financial modelling and negotiations with insurance companies. Understanding local market dynamics to ensure viability of the product is key. New regulation might be needed to allow for

scheme to be set up.

- **Cost of implementation:** There is a high degree of complexity involved in setting up a novel environmental insurance product, which can be costly given the time and the special expertise required. Once set up, however, the insurance product often requires relatively little ongoing funding.
- **Flexible use of funds:** The payout from the policy should be used for the specific purposes set out in the insurance scheme, e.g. to restore damaged coral reef.
- **Sustainability:** The lower-premium model, which incorporates the risk reduction benefits of natural capital in insurance pricing, has the potential to generate sustainable funding over the long term through the discount generated. As noted, this model remains at the concept stage only. Where the natural capital is itself insured, the insurance solution will only pay out if the catastrophic event happens and so is dependent on external factors to generate revenue. If, for instance, the policy covers against typhoon risk and no typhoons occur, the solution will generate no income. When the policy is triggered, however, there is potential to receive large funds for losses incurred.

### 3.3.9 Green/Blue taxes

Green/Blue taxes are taxes levied on businesses and individuals by governments, focused on disincentivising "bad practices" (e.g. practices which cause damage to the environment). Such taxes can support conservation both by incentivising a reduction in harmful activities, and by generating revenue to support conservation activities. The use of green/blue taxes is becoming more mainstream, as taxes on greenhouse gas emissions are frequently promoted as a powerful incentive mechanism for switching to cleaner renewable energy sources. In the field of ocean conservation, taxes could be levied on marine pollution and unsustainable fishing practices to generate significant new revenues for ocean health and protection.

Strengths & weaknesses:

- **Scale:** Highly variable depending on the activities being taxed, the number of potential taxpayers and political will to raise it - but potentially large.
- **Contextual adaptability:** Finances raised by green/blue taxes can be used to suit a variety of LSMSPA conservation objectives and activities. Governments will normally set the parameters regarding how revenues can be utilised.
- **Ease of implementation:** Putting in place the

appropriate legislation can be a lengthy political and regulatory process. Many country governments do not have sufficient capacity to enforce and manage tax revenue systems.

- **Cost of implementation:** If an existing tax collection system is not in place there will be costs associated with initial set-up. Once in place, maintenance costs will depend on complexity of the tax (e.g. if collected at one or multiple locations). Government and conservation managers/practitioners often bear these costs. The cost of lobbying to influence public policy must also be taken into account.
- **Flexible use of funds:** Taxes usually enter general treasury accounts where the idea is for them to be earmarked for conservation. Here, issues of transparency, diversion of funds and wavering public support can arise.
- **Sustainability:** Dependent on continued political will and public support. Depending on the tax mechanism, taxes can provide on-going income to (predominantly) government agencies for environmental activities; however, those environmental taxes designed to reduce harmful activities should have declining income as behaviours change over time.

### 3.3.10 Payment for Ecosystem Services

Payment for Ecosystem Services (PES) is 'a monetary compensation for securing delivery of certain ES, where suppliers who manage the flow of services are paid by beneficiaries' (JNCC, 2017). In return for payments, ES suppliers voluntarily adopt alternative management strategies that deliver a set of important ES to a wider benefiting population. PES can be distinguished from offset which are 'beneficiary pays' schemes, whereas offsets follow a 'polluter pays' principle (Smith et al., 2013). PES systems operate in a diverse set of contexts, and what constitutes a PES in both theory and practice is still open to debate. However, they tend to cover a common set of activities which include restricting agricultural development, adoption of sustainable land management practices, reforestation and reducing deforestation, and protecting watersheds and hydrological services. (Hejnowicz et al., 2020). Institutionally, PES programs are generally decentralised mechanisms that favour bottom up solutions to management issues, and as such, they tend to involve multiple partners, spanning spatial and temporal scales (Hejnowicz et al., 2020). The financial arrangements underpinning PES schemes also vary; NGOs and CSOs typically set up PES systems and collect the funds, although it can also be government managed or financed and managed under a hybrid arrangement (JNCC, 2017).

In a marine setting, the 'service' provided can range from flood prevention benefits provided by mangrove forests, to fish nurseries by seagrass habitats, or to the pristine marine environment provided by a healthy coral reef system. A tourism agency could, for example, pay for the management costs of an MPA to ensure that the MPA is successfully managed, ensuring that the diving experience remains attractive to the tourism agency's customers (JNCC, 2017).

For PES schemes to be viable and successful a few prerequisites must be met, these include: a desired ES available on-site; a clear benefit to both beneficiaries and providers; an independent intermediary to manage the financial arrangement; and payments should account for providers full opportunity costs. More often than not, PES schemes require coordination by a number of actors across multiple ES; these can also include 'upstream' actors that can also have serious implications for the success of any scheme, although they may not be included as stakeholders or indeed, as providers to be compensated.

In the past decade there has been increased focus on terrestrial level PES programs, notably Costa Rica's national PES watershed program Pago por Servicios Ambientales (PSA). Such projects show clear upstream to downstream benefit flows and demonstrate the potential for PES to incentivise land use change. However, the effectiveness of any PES mechanism is determined by targeting, additionality, permanence, leakage and equity, and the degree to which even these 'simpler' PES has met these targets is still up for debate (Pfaff et al., 2008; Wunder, 2007). For projects with more complex ES systems in place, the challenges will be even greater to mitigate. For example, ocean and marine ES flows, like biodiversity flows more generally, are less well known. These uncertainties, along with costly monitoring processes discourage market investment. Developing appropriate proxies for the provision of an ES will be critical to any ocean-based PES. A lack of clear property rights as to who can sell what services within a marine setting further adds to the uncertainty of PES as an appropriate tool in the wider ocean setting of LSMPAs.

Strengths & weaknesses:

- **Scale:** Currently unlikely to generate meaningful funding at the LSMPA scale, although some potential at site level, but may have future potential with further research and investment. LSMPAs are home to a number of ES that, if PES markets are established for, could generate significant income, i.e. coastal zone protection as well as local (and potentially global) fishery benefits. However, the development of such markets is nascent and will require improved property rights, as well

as continued improvement in the underlying quantification and monitoring of any benefit flows.

- **Contextual adaptability:** In theory, PES systems can be set up for a wide variety of services. However, it is difficult to identify funding areas where all conditions for a PES are met, which limits viable options. Structuring such a FM and attracting parties willing to pay for such services can also be challenging, particularly in remote marine locations. Many of the potential PES schemes of note are specific to coastal zones and may not be viable for open ocean LSMPAs.
- **Ease of implementation:** Proper valuation of ES and quantification of benefits is technically challenging, and most PES systems require a robust ongoing monitoring system to verify the quality/quantity of the service provided. Engagement with local communities during set-up as well as on an on-going basis is essential, which can be challenging if service providers are spread out across large areas, or a large number of individuals are involved. Lack of clarity on property rights and ownership can also create legal challenges.
- **Cost of implementation:** Relatively high costs involved in setting up, monitoring and enforcing these schemes. Most PES systems rely on additional government or grant funding to run successfully. In Costa Rica's PSA system, for instance, funds for PES payments come from a mix of sources such as a fossil fuel sales tax, a water tariff, and grants from GEF and the World Bank.
- **Flexible use of funds:** Proceeds should be used to ensure protection of the ES in question, even if this can be hard to monitor at times. As PES is effectively a payment for improved 'natural resource management', PES payments can be used to cover core LSMPA management costs where management will increase delivery of the ES in question. This can also include monitoring and surveillance activities.
- **Sustainability:** Requires strong oversight, government policy, and continued stakeholder buy-in to keep the scheme sustainable over time. In some instances, ES delivery can be negatively affected by 'upstream' stakeholders not directly involved in the PES scheme. Improved ES delivery will be dependent on continued payments.

### 3.3.11 User fees

User fees are typically structured as entrance or activity fees charged to visitors when entering a particular area where visitors can enjoy some recreational benefit, such as diving. The fee is normally charged

by the government that is operating a public PA, and the fee can be collected by NGOs, third parties such as tour operators, or government agencies. It can also be collected in other parts of the PA. NGOs or government agencies typically manage the funds. The fee can be one-off, annual, or on a lifetime basis. In some instances, entire countries charge incoming tourists a user fee, with a portion of the proceeds often invested back into environmental protection activities (e.g. Palau Pristine Paradise Fee).

Fees can also be **concessions** in the form of leases, licences or permits granted to entities that are undertaking operations in the protected area, such as cruise ships, fisheries, restaurants, lodges, guides or dive boats. Concessions are normally awarded with an upper limit to the length of the concession period (usually 20 years or less) (Thompson et al., 2014). The concession rate can be structured in several ways, e.g. a percentage of the gross income by the operator, the number of yearly customers served by the concession, or an annual fixed fee (IUCN, 2000). In the case of MPAs, a concession could be granted to a private manager of an eco-resort, for instance, who would deliver professional management of the area in exchange for the ability to generate revenue from eco-tourism (Thiele & Gerber, 2017).

Strengths & weaknesses:

- **Scale:** User fees can provide funding at a scale that is meaningful in the LSMPA context, however this is dependent on the number of users. There are some existing LSMPA examples where user fee revenues serve as the primary funding source to support core operating costs.
- **Contextual adaptability:** User fees can take a variety of forms and may be applicable across a variety of contexts. However, the remote location of many LSMPAs may limit the feasibility of directly tying user fees to conservation efforts.
- **Ease of implementation:** Administration of user fees can be challenging, particularly in the LSMPA context where conservation efforts may be dispersed, remote and cross jurisdictional boundaries. Such a fee system would likely require a suite of new regulations and operating procedures as well as full time staffing to be put in place.
- **Cost of implementation:** Set-up costs may include advocacy and design of new regulations, along with the training and deployment of staff and development of communications materials regarding fee collection and use, among other things. There are also costs involved, albeit lower, in the ongoing maintenance of the user fee system.

- **Flexible use of funds:** Some national legislation requires the fee to be channeled into a national account before being re-distributed on local level, creating potential transparency issues. On the other hand, fees generate unrestricted income that can be drawn upon continuously, making it an important revenue source to cover on-going operational expenses.
- **Sustainability:** Revenue is dependent on external events affecting visitor numbers such as political instability and natural catastrophes, such as the global COVID-19 pandemic, but if visitor numbers are stable the mechanism represent a relatively secure source of income.

### 3.3.12 Biodiversity and carbon offsets

Biodiversity offsets are measurable conservation outcomes that result from actions designed to compensate for significant, residual biodiversity loss from development projects. They are intended to be implemented only after reasonable steps have been taken to avoid or minimise biodiversity loss at a development site. Biodiversity offsets are based on the premise that impacts from development can be compensated for if sufficient habitat can be protected, enhanced or established elsewhere (OECD, 2016).

Sometimes, the funds from the developer are used for environmental projects elsewhere. This is the case in Australia, for instance, where mining and construction companies inland can provide funds for conservation projects on the coast, as a way to compensate for their environmental damage (Queensland Resources Council, 2020).

Payments can be made either upfront or over time, though ideally the funding would match project impacts in terms of timing and duration. The most common objective adopted in offset programmes is to deliver No Net Loss (e.g. of a habitat, species, ecological status, ES), although several programmes have adopted a more ambitious goal of Net Gain (OECD, 2016).

Developers can either decide to voluntarily adopt certain standards to reduce impacts on biodiversity and ecosystems, or the government develops regulations that compels private sector action. Sometimes adopting certain performance standards is also required from investors. Biodiversity offset programmes have been widely used in the United States, Australia and other countries where they generate billions of dollars annually for restoration and management. Biodiversity offsets have been primarily applied in terrestrial environments but is increasingly being looked at for marine purposes as well (Iyer et al., 2018).

Carbon offsets work in a similar way to biodiversity offsets. Investors can offset carbon emissions by buying carbon credits off private companies, NGOs or nature managers, who in turn use the funds for projects that help reduce/store greenhouse gas emissions, such as mangrove restoration (JNCC, 2017).

Carbon markets exist under both mandatory (compliance) schemes and as voluntary programs. Compliance markets are created and regulated by mandatory national, regional or international carbon reduction regimes. Voluntary markets enable companies and individuals to purchase carbon offsets on a voluntary basis with no intended use for compliance purposes (Carbon Offset Guide, 2020).

The potential quantification of carbon storage and sequestration within coastal ecosystems and the creation of tradable 'blue carbon' certificates could help develop a marketable product for the coastal marine environment – a market that remains in its nascent form today (Thiele & Gerber, 2017).

The current potential for biodiversity and carbon offsets to generate meaningful revenue for LSMPAs is limited due to inconsistent pricing/demand, the nascent stage of the markets, and lack of potential fit with assets (carbon, etc.) provided by LSMPAs. Offset financing may be targeted only at a particular component or subset of LSMPA assets (e.g. coral reefs, mangroves, beach/turtle-nesting habitat, etc.). In such cases it is unlikely that an offset investment will generate sufficient financing to meaningfully contribute to operating costs for LSMPAs.

Strengths & weaknesses:

- **Scale:** The offset market is still nascent and emerging, but the scale of potential offsets generated in an LSMPA context can be significant and could garner significant

**GBRMP biodiversity offsets:** In Australia, biodiversity offsets can be purchased for potential harm from operations to The Great Barrier Reef. The money is paid into the Reef Trust which is tasked with directing the finance towards conservation objectives. Offset projects are developed in consultation with relevant stakeholders and the Reef 2050 Independent Expert Panel and provided to the Minister for the Environment and Energy for approval. The Reef Trust will use the 10 percent Department handling fee to engage expertise to design and contract manage offset projects. Use of the Reef Trust to deliver environmental offsets is voluntary (Australian Government, 2019).

funding if demand and pricing for such offsets strengthens. Most offsets are made via the private voluntary market and corporate social responsibility programs, as well as private philanthropic funding.

- **Contextual adaptability:** Most offsets can be adapted to a variety of conservation outcomes; coastal/marine environments are increasingly being analysed for offset potential. Carbon and biodiversity offsets have defined technical criteria that must be met, and certain LSMPA environments will not meet these criteria. e.g. if an LSMPA has no significant carbon-rich habitats (mangroves, seagrass, salt marshes), carbon offsets are not applicable. The contextual applicability will depend on the demand for the specific type of offset required.
- **Ease of implementation:** Biodiversity and carbon offsets are both highly technical interventions requiring significant technical expertise, lengthy project preparation procedures and robust monitoring and evaluation (M&E) systems. In some cases, offsets may require new policies or changes in regulatory frameworks.
- **Cost of implementation:** Biodiversity and carbon offsets are relatively costly to design and establish, require rigorous M&E systems over the long-term. Success of carbon offset programs depends largely on the ability to sell third-party verified carbon offsets on the private voluntary market. Biodiversity offsets generally require a long-term investment by the company/actor that is aiming to offset its environmental impact.
- **Flexible use of funds:** Funds can be distributed flexibly but are often used for specific targets to achieve the offset criteria.
- **Sustainability:** Most offset programs are established as long-term interventions, as both carbon and biodiversity offsets require long-term investment to ensure that the managed/protected assets (e.g. carbon stock, intact biodiversity, etc) are maintained.

## Top findings from LSMPA review



Commonly called bubble coral, *Plerogorgia sinuosa* is a jelly-like species of the phylum Cnidaria Marianas Trench Marine National Monument © NOAA

The LSMPA review was divided into two sections: a desktop review of ten case studies, followed by an in-depth analysis of three of these. The full review is available within **Supplementary document 2: Desktop review of ten LSMPAs**. Sites were selected using a rigorously developed methodology as described in Section 2.3.2. Due to the small population of LSMPAs, the smaller sample size, and the varying contexts and stages of LSMPA development, our review does not yield statistically significant conclusions. Despite this, several dynamics and trends clearly emerge from a systematic investigation. Main sources of funds, use of FMs, challenges and recommendations/key lessons of the 10 LSMPAs can be found on the following pages in Table 5 and Table 6.

Our analysis of the selected LSMPAs showed that no site reported receiving sufficient private or public income to completely fund management activities and that overall, financing portfolios are limited in both size and scope. Most LSMPAs were funded through government budget allocations plus a mix of private donations, ODA and tourism fees. The exception being GBRMP, which had an additional biodiversity offset program. No LSMPA was found to be using more than three sources of funding except GBRMP.

Our top findings are summarised below. Each illuminates that multiple, interconnected challenges must be addressed to improve financing opportunities for LSMPAs globally.

1. **Fully-funded is a myth** - None of the LSMPAs within the study reported being fully funded. Moreover, with the ongoing need for innovative research and monitoring, as well as addressing ever-increasing global threats, full-funding was not necessarily the highest priority for a site, nor the bar for identifying a successful management regime. Analysis indicates that securing funding for core management needs (of the moment) and understanding how to increase the scope and scale of financing as well as management and protection over time, is most important. However, as the genre matures and more practical FMs are developed, this assessment may change.
2. **Employing multiple FMs, as opposed to a stand-alone FM, leads to better outcomes** - Public budget allocations, tourism fees, and donor-supported CTFs are the most commonly employed FMs for LSMPAs. Many LSMPAs implement only one FM, but it is those LSMPAs that combine two or more mechanisms, irrespective of whether they are traditional or innovative, that display strength and long-term portfolio viability.
3. **Innovative FMs are too nascent** - With a minimal track record, especially in the LSMPA genre, emerging FMs have not yet proven their long-term viability. Additionally, as the financial portfolios of even the most veteran sites remain heavily reliant on government resources and tourism, new options and strategies are not actively being developed and tested. At present there does not seem to be sufficient momentum behind developing new FMs nor customizing existing ones to account for the needs of LSMPAs.
4. **Financial plans and strategies are underutilised** - A number of the LSMPAs reviewed did not have fiscal plans or strategies in place. Those that did, with the exception of the GBRMP, often only developed these plans and strategies after LSMPA inception and establishment. However, evidence demonstrates that dedicated and well-resourced financial planning from the earliest stages of LSMPA site design and development strongly correlates to the overall strength of the financing portfolio.
5. **LSMPA financing generally requires policymaker political support and awareness** - vast MPAs rely heavily on government allocations. Weak political relationships or a lack of understanding by politicians can render a management team ineffective during lean

budgetary times. As well, due to their high visibility, LSMPAs can experience significant fluctuations in allocated budget as a result of changing political allegiances and administrations.

6. **LSMPAs require a substantive political will at the national-level** – The relationships and outreach required to facilitate high-quality political leadership can be challenging to develop and maintain. It appears, LSMPA managers who understand their site’s legislation and regulations, who track relevant policy changes and consistently articulate the benefits of LSMPAs to government and civil society, are best able to withstand political change and shifting government interests.
7. **Successful LSMPA financing generally includes public/private partnerships** – At those sites where government funding is insufficient, LSMPAs that establish partnerships with private organisations and institutions are usually successful in securing additional funding. Inclusion of additional FMs has also required government agencies to support the creation of laws and policies that allow for these partnerships to avoid burdensome administrative processes.
8. **LSMPA performance generally benefits from having managing staff with strong capacity in financial administration** – Examples of financially successful LSMPA (e.g. GBRMP) show the importance of robust funding and distribution mechanisms. These are underpinned by institutional and capacity development at the local level.
9. **Remote LSMPAs struggle to access finance** – Tourism or entry/access fees are often cited as the least complex FMs that can quickly provide an ongoing income stream for protected areas (marine and terrestrial). However, many LSMPAs have permit-only or minimal access, and for very remote sites, the geographic location alone makes access nearly impossible unless one has substantive financial resources. FMs that do not allow extractive activities nor access or at least do not require public access need further development.

The box on the following page is a snapshot of the findings from the LSMPA review.



Table 5. General information of the ten LSMPAs.

	1	2	3	4	5	6	7	8	9	10
<b>Criteria round 1</b>	<b>GBRMP</b>	<b>GMR</b>	<b>PMMM</b>	<b>RAMPAN</b>	<b>PIPA</b>	<b>MMH-RAPA</b>	<b>PMNS</b>	<b>NPCS</b>	<b>PMPBR</b>	<b>MMMP</b>
State or Country	Australia	Ecuador	USA	Indonesia	Kiribati	Chile	Palau	France	Mexico	Cook Islands
Year Established	1975	1998	2000	2003	2006	2010; 2018	2015	2014	2016	2017
Age	>10	>10	> 10	>10	> 10	<10	<10	<10	<10	<10
Country Status	1	2	1	2	SIDS	2	2	4	2	2
Management Plan	Yes	Yes	Yes	Yes	Yes	Pending	Pending	Yes	Pending	Pending
No-Take	No	Mixed	All	Partial	TBD	TBD	All	All	Mixed	No take
Fishing	Restricted	Restricted	Restricted	Restricted	Restricted	Restricted	Restricted	Restricted	Restricted	Yes
Access	Restricted	Restricted	Restricted	Restricted	Restricted	Restricted	Unknown	Restricted	Restricted	Yes
<b>Criteria round 2</b>	<b>GBRMP</b>	<b>GMR</b>	<b>PMMM</b>	<b>RAMPAN</b>	<b>PIPA</b>	<b>MMH-RAPA</b>	<b>PMNS</b>	<b>NPCS</b>	<b>PMPBR</b>	<b>MMMP</b>
Establishing Legislation	New	E-mod	E-mod	New	New	New	New	Unknown	New	New
Management Maturity	Innovation	Planning	Innovation	Building	Building	Planning	Planning	Planning	Planning	Planning
Zoning	Mixed-use	Permit Only	Permit Only	Mixed-use	Permit Only	TBD	Mixed-use	Permit only	Permit Only	Mixed-use
Characterisation	Sufficient	Sufficient	Sufficient	Working	Working	Working	Insufficient	Working	Insufficient	Insufficient
Population	Large	Large	<500,000	Large	Medium	Large	Small	Very small	Large	Small
Indigenous Population	Subordinate	Subordinate	Subordinate	Subordinate	Dominant	Subordinate	Dominant	Subordinate	Subordinate	Dominant
Tourism	Viable	Viable	Not allowed	Viable	Limited	Not allowed	Viable	Limited	Insufficient	Viable
Risk Assessment	Complete	Complete	Complete	In process	None	None	None	Unknown	None	None
Budgetary Status	Effective	Sufficient	Effective	Sufficient	Prescribed	Preliminary	Preliminary	Preliminary	None	Preliminary

**Table 6.** Main funding sources, use of mechanisms, challenges and recommendations/key lessons of the ten LSMPAs.

Site name	Main sources of funds	Current financing mechanisms	Challenges	Recommendations/Key lessons
<b>GMR</b>	<ul style="list-style-type: none"> <li>Government</li> <li>Individuals</li> <li>Tourism</li> </ul>	<ul style="list-style-type: none"> <li>Public budget allocations</li> <li>Private and Philanthropic Grants</li> <li>ODA</li> <li>CTF</li> <li>User fees</li> </ul>	<ul style="list-style-type: none"> <li>Business/Financial Plan not yet developed</li> <li>Existing CTF only related to eradication of invasive species</li> </ul>	<ul style="list-style-type: none"> <li>Diversify portfolio of FMs directly related to the Marine Reserve</li> <li>Finalise the Business/Financial Plan</li> </ul>
<b>PMNM</b>	<ul style="list-style-type: none"> <li>Government</li> <li>Individuals</li> </ul>	<ul style="list-style-type: none"> <li>Public budget allocations</li> <li>Private and Philanthropic Grants</li> </ul>	<ul style="list-style-type: none"> <li>Internal administrative capacity</li> <li>Administrative fees</li> <li>Time-limited</li> <li>Activity-oriented</li> </ul>	<ul style="list-style-type: none"> <li>Existing mechanisms that address private donations and public budget allocations should account for long term management needs, versus discrete activities</li> <li>Granting mechanisms more like CTFs need to be developed for LSMPAs in the United States</li> <li>A greater percentage of the overall national budget should be marked for conservation as a whole and more specifically for marine conservation</li> </ul>
<b>RAMPAN</b>	<ul style="list-style-type: none"> <li>Government</li> <li>Tourism</li> </ul>	<ul style="list-style-type: none"> <li>Public budget allocations</li> <li>ODA</li> <li>CTF</li> <li>User fees</li> </ul>	<ul style="list-style-type: none"> <li>Tourism impacts on marine ecosystems</li> <li>Lack of sufficient investment in tourism management</li> <li>Lack of a central body representing the BHS conservation initiative in CTF</li> <li>Inconsistency of local grantees</li> </ul>	<ul style="list-style-type: none"> <li>Despite robust overall funding portfolio, challenges remain in ensuring sufficient scale and effective distribution and utilisation of funds</li> <li>Tourism plays key role in financing conservation, and unique public service agency management structure allows direct use of fees</li> <li>Greater investment in mitigation of tourism impacts on ecosystem is needed</li> <li>Continued efforts are needed to ensure efficient and effective distributions and utilisation of funds</li> </ul>
<b>MMH-RAPA</b>	<ul style="list-style-type: none"> <li>Government</li> </ul>	<ul style="list-style-type: none"> <li>Public budget allocations</li> </ul>	<ul style="list-style-type: none"> <li>Effectively integrating the Management Planning process, and the development of a comprehensive, joint plan for both sites</li> <li>Despite a commitment to streamline the overarching system for natural resource management in Chile (terrestrial and marine), national support for protected areas overall remains insufficient, and the long-term outlook for newly added protected areas remains questionable</li> </ul>	<ul style="list-style-type: none"> <li>Integrate national resource management processes and departments for more effective and efficient use of human capital and funding—this can include merging various departments and ministries under one overarching agency, as seen in Chile</li> <li>Build the capacity of local communities to effectively communicate with managers and key policymakers about the importance of protected areas to holistic community wellness, such as the perpetuation of culture, livelihoods and long term food security</li> <li>Prioritise the development of outreach materials that thoughtfully translate scientific data and emerging research that draws clear connections between the benefits of LSMPAs and the socio-economic and cultural health of community</li> </ul>
<b>NPCS</b>	<ul style="list-style-type: none"> <li>Government</li> </ul>	<ul style="list-style-type: none"> <li>Public budget allocations</li> </ul>	<ul style="list-style-type: none"> <li>Current costing of management activities is underway, but more information is required</li> </ul>	<ul style="list-style-type: none"> <li>Diversify portfolio of FMs</li> <li>Develop Business/Financial Plan</li> </ul>
<b>PMPBR</b>	<ul style="list-style-type: none"> <li>None</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>	<ul style="list-style-type: none"> <li>Lack of transparent instruments for allocation of funds at governmental level</li> <li>PMPBR not a priority site for the protected areas central government agenda</li> <li>Because of its uniqueness and inaccessibility (protection of deep-sea ecosystems), the estimated budget for its implementation and management is really high</li> </ul>	<ul style="list-style-type: none"> <li>Increase cooperation with central government to receive financial support and initiate implementation of activities</li> </ul>

Site name	Main sources of funds	Current financing mechanisms	Challenges	Recommendations/Key lessons
<b>MMMP</b>	<ul style="list-style-type: none"> <li>Government</li> <li>Individuals</li> </ul>	<ul style="list-style-type: none"> <li>Public budget allocations</li> <li>ODA</li> <li>Private and Philanthropic Grants</li> <li>Potential user fees (scoping)</li> </ul>	<ul style="list-style-type: none"> <li>Management Plan in development</li> </ul>	<ul style="list-style-type: none"> <li>It is critical that any FM approach achieves broad consensus and gives careful consideration to the need for transparent application of potential revenues as well as making them available to the broad range of actors involved in Marae Moana implementation</li> <li>Given the multi-stakeholder, multi-agency nature of Marae Moana, efforts should be made to systematically track expenditures within government, as well as investments made by civil society, traditional leadership and the private sector that contribute to Marae Moana's implementation. This will reduce overlap and help Marae Moana understand critical activity/financing gaps that could be supported by a FM</li> <li>Given the maturity and the diversity of the Cook Islands economy, there are many 'blue economy' sectors and industries that depend on healthy ocean ecosystems (e.g. tourism, fisheries) and therefore should be contributing back to Marae Moana's operations</li> </ul>
<b>GBRMP</b>	<ul style="list-style-type: none"> <li>Government</li> <li>Individuals</li> <li>Tourism</li> <li>Private companies</li> </ul>	<ul style="list-style-type: none"> <li>Public budget allocations</li> <li>Private and Philanthropic Grants</li> <li>User fees</li> <li>Biodiversity offsets</li> </ul>	<ul style="list-style-type: none"> <li>Reliance on government funding, even though other FM are used as well</li> <li>Reliance on income from tourists is risky as external events (e.g. the COVID-19 crisis, recent wildfires) can greatly impact tourism numbers and thus revenue</li> <li>Biodiversity offsets are voluntary only</li> <li>Current slump in the GBR Foundation's reputation</li> </ul>	<ul style="list-style-type: none"> <li>Make biodiversity offsets for projects inside or in the vicinity of the Reef compulsory</li> <li>Raise the environmental management charge fee. It is very low compared to international counterparts (e.g. Galapagos, Raja Ampat)</li> </ul>
<b>PIPA</b>	<ul style="list-style-type: none"> <li>Individuals</li> </ul>	<ul style="list-style-type: none"> <li>Private and Philanthropic Grants</li> </ul>	<ul style="list-style-type: none"> <li>Limited funding portfolio; originally designed with CTF as sole funding source</li> <li>Grant funding set to expire 2020; insufficient endowment to offset ongoing management costs</li> <li>Introduction of a potential compensatory arrangement (reverse fishing license) has made fundraising for PIPA Trust more difficult</li> </ul>	<ul style="list-style-type: none"> <li>Diversify portfolio of FMs</li> <li>Develop prioritised management plan</li> <li>Allocate dedicated resources to fundraising for the CTF</li> <li>Develop a cost benefit analysis for all new potential financing strategies</li> <li>Revisit current permit/fee structures and pricing</li> <li>Invest in demonstrating PIPA's value to national government</li> </ul>
<b>PNMS</b>	<ul style="list-style-type: none"> <li>Government</li> <li>Individuals</li> <li>Tourism</li> </ul>	<ul style="list-style-type: none"> <li>Public budget allocations</li> <li>ODA</li> <li>Private and Philanthropic Grants</li> <li>User fees</li> <li>CTF</li> </ul>	<ul style="list-style-type: none"> <li>PNMS Strategic Plan endorsed but not implemented</li> <li>No staff from any implementing agencies entirely dedicated to the implementation of PNMS activities</li> <li>Unclear current budget for PNMS activities</li> <li>Transitional time during which the next steps for PNMS implementation are under discussion</li> <li>High dependency on tourism revenues</li> <li>Uncertainty on systems and timing that dictate the functioning of Fisheries Protection Fund and fines for IUU</li> <li>Current FMs are not sufficient to cover the implementation costs of PNMS</li> <li>Large gap in number of staff for both managing FMs and implementation of PNMS activities</li> </ul>	<ul style="list-style-type: none"> <li>Finalise allocation of funds for each of the priority areas outlines in the PNMS Strategic Plan</li> <li>Diversify portfolio of FMs to reduce dependency on tourism</li> <li>Increase number of staff for managing current and future FMs</li> </ul>

## Box 1.

The **Great Barrier Reef Marine Park** is the world's oldest LSMPA, protecting the world's largest coral reef system. It is managed by a number of actors who navigate a range of regulations and guidelines to implement projects on a national, regional or local level. As the primary implementing body, the GBRMP Authority, receives the majority of the funding that goes into the Reef. The Authority is responsible for the administration of the matched funding provided by the Australian and Queensland governments under an Intergovernmental Agreement. Although some 70 percent of current funding originates from state and Commonwealth budget allocations, biodiversity offsets have the potential of generating significant income from industry; however, since they are only legally required for larger projects, neither their timing nor scale can be relied upon.

As an access-restricted protected area within the context of the world's largest economy, **Papahānaumokuākea** receives more direct budgetary allocations than many LSMPAs globally. However, as the site is co-managed by both US State and Federal agencies, the process to directly access or benefit from truly "sustainable" financing that pools financial assets (e.g. an investment portfolio), and generates returns, is very challenging.

Although legally established, management plans for both **Motu Motiro Hiva Marine Park** and **Rapa Nui Multiple-Uses Marine Protected Area** are in development and should be completed by the end of 2020. As with most management plans, detailed budgets will be developed for every strategy and activity; however, the present scope and scale of the plans has been developed around a basic level of management. The majority of the funding, approximately 80 percent, is slated for monitoring and enforcement by the Chilean Navy, which is also a significant factor in budget negotiations and formal approval. Often most critical and expensive activities, it is not atypical that monitoring and enforcement comprise such a large percentage of total costs for many remote LSMPAs, particularly those which receive limited management funding from the onset. A number of innovative approaches have been employed across LSMPAs to improve and reduce monitoring and enforcement costs, ranging from satellite imaging (PNMS) to community patrols (Raja Ampat).

Creating a FM to support long-term management costs as well as to replace any potential lost fishing revenue was central to political support for the **Phoenix Islands Protected Area**. In 2014, the Government of Kiribati with support from partners enacted the PIPA Conservation Trust Act, the first marine conservation contract of its kind. The contract provisioned that management costs and compensation for potential losses were to be covered by revenues generated from a single endowment, the 'The Phoenix Islands Protected Area Conservation Trust Fund'. However, to date, the endowment has not reached its desired potential, currently capitalised at AUD 5.5M, with transitional grant funding set to expire in 2021. Despite this imminent funding gap, management plans and subsequent costs have not been tailored towards essential services or sought to streamline costs. Determining potential lost tuna revenues has also proven challenging with advocates on both sides of the debate; some believe the site has added value to Kiribati's tuna fishery due to evidence that it is a spawning ground for commercially important tuna, while others claim lost revenue from lost fishing access. Due to the LSMPA's remote location, management struggles to identify additional revenues streams and without significant additional investment the Trust will struggle to fully fund on-the-ground management, let alone any potential compensation values deemed relevant.

The **Palau National Marine Sanctuary** receives USD 10 from Palau's highly successful tourism fee (Pristine Paradise Environmental Fee: PPEF) which is set at USD 100 per visitor. This allocation is directed into the Fisheries Protection Trust Fund. Under a potential change to the PPEF a further USD 5 is earmarked to support administration of the PNMS (through Palau International Coral Reef Centre: PICRC). However, the revenues created through PPEF are not sufficient to cover the implementation of the sanctuary. Moreover, the PPEF is highly susceptible to volatilities in the tourism market and can promote a volume-based market strategy. In 2018, Palau received 116,000 visitors, down 22 percent from 2016. For this reason, international grants and donations still represent the main source of funding for all the governmental agencies engaged in the implementation of the sanctuary.

**Raja Ampat** in West Papua Indonesia has been able to take advantage of strong growth in tourism through a well-structured entry fee mechanism. The area is also supported by a regional CTF which has helped to fill gaps during earlier growth stages and may be able to again play an important role in the event of an emergency or downturn in tourism arrivals. As a public service agency, the MPA management body maintains the flexibility to directly receive and manage tourism fees and may likewise hire professional (non civil servant) management staff. Still, challenges remain. Increased investment is now needed to manage the impacts of increasing tourism arrivals. Similarly, healthy revenue streams perhaps inevitably create administrative and political challenges. Despite the healthy financial outlook in Raja Ampat, or perhaps because of it, continued vigilance and investment is still required in order to build on prior success and lock in conservation gains.

## Finance recommendations



Pacific Remote Islands Marine National Monument. © US Fish and Wildlife Service

A total of eight recommendations have been identified based on the desktop reviews and in-depth research of ten LSMPAs around the world. The recommendations are organized into three categories:

1. LSMPA design/planning
2. LSMPA implementation and deployment
3. Growing the field of LSMPA financing

### 5.1 LSMPA design and planning

#### 5.1.1 Robust business and financial planning is a key part of LSMPA design

The process of LSMPA design and legal establishment should be accompanied by a robust business planning process. Anecdotal evidence indicates the importance of early stage financial and business planning to the long-term prospects for sustainable LSMPA financing. Such plans will enable LSMPA managers to identify costs or inputs necessary to achieve specific management targets, as well as comprehensively prioritise the required management inputs and activities. These plans should contain an analysis of current and potential fund-generating opportunities and should identify the potential steps and investments needed to tap existing revenue streams or unlock new ones. The business plan should be considered an essential tool to build the economic case for resources in a competitive budget and fundraising environment.

A well-crafted business plan will include a detailed long-term financial plan (5-10 years). These financial forecast models are dynamic. It is challenging to know exact costs and revenues with great precision from inception, but these models can give practitioners certain financial parameters that help them better understand their key cost drivers and cost efficiencies, potential financing gaps, and the ability to analyse how these evolve over time. Most business plans contain a range of scenarios to help managers understanding financing gaps under different management scenarios (e.g. minimal, basic, optimal, etc.).

Through business planning, it should be possible to analyse up-front the feasibility of various FMs. This will allow practitioners to understand the feasibility, timing and set-up costs of any potential FMs. Having these types of interventions planned and concepts articulated at the outset can help strengthen funding opportunities during LSMPA design, planning and legal establishment.

#### 4.1.2 Incorporate sustainable financing concepts into LSMPA design processes

LSMPA design processes naturally tend to focus on the technical aspects of creating a new area for conservation. Oftentimes in the excitement of generating a LSMPA outcome, too little attention is paid to the long-term financial challenge of effectively managing an LSMPA. The question 'how will this be paid for?' should be regularly explored as part of the LSMPA design process.

Ideally, LSMPA design itself factors in opportunities to derive financial/economic value from the site. In the stages of management, planning and zoning, LSMPA designers should understand the economic implications of boundary definition and zoning decisions, and, where possible, look for opportunities to shape LSMPAs in such a way that considers whether a particular ecosystem good or service has potential for commercialization without impacting conservation values. For instance, if an LSMPA has an opportunity to incorporate certain ecological sites

or features (e.g. coastal assets) which could attract tourism opportunities, consideration should be given to these options.

The journey of LSMPA design and establishment is one of the best opportunities that LSMPA practitioners and supporters will have to raise the issue of financing. If the financing needs of an area have been carefully analysed, it is much easier to incorporate these messages as part of the external communications and outreach to the international community, including potential donors.

### 5.1.3 Adopt a cost-conscious and efficiency seeking paradigm

Every existing LSMPA has faced a resource-constrained scenario at some stage of development. Given this operating reality, LSMPA managers must constantly consider how to increase management performance relative to expenses and at the outset, actively seek out improvements in cost-effectiveness. LSMPAs that exhibit cost-conscious planning and are able to document greater cost-effectiveness over time (better conservation delivery and decreasing costs) become a better investment proposition for both public (e.g. government) and private funders.

LSMPAs face unique logistical constraints (e.g. enforcement, surveillance, monitoring and research), but there is now a substantial body of experience to help LSMPA designers and practitioners achieve key management objectives. Resources are available to help managers understand how other LSMPAs have improved the viability of their management plans by prioritizing activities and seeking out cost efficiencies (e.g. Big Ocean Network).

For example, managers should critically assess the risk of including certain high-cost investments in their LSMPA planning processes. For example, LSMPAs cover large amounts of remote ocean territory, and practitioners naturally aspire to build and maintain an on-site surveillance and enforcement presence in large marine areas, but the costs of doing so may be prohibitive. Technological solutions for remote surveillance are playing a larger role in the management actions of LSMPAs and are also becoming more accessible. LSMPA managers will need to track the development of emerging surveillance technology platforms to see where they might be able to access these critical tools more cheaply.

## 5.2 Implementation and deployment

### 5.2.1 Take a portfolio approach to LSMPA finance

To date, there are limited examples of FMs that have been deployed in LSMPA contexts. Government budgets are, and will likely remain, the most critical

component of LSMPA finance, and such allocations should be increased to the greatest degree possible. However, there are limitations to such financing, particularly in the LSMPA context; LSMPAs should seek to diversify their revenue streams, and practitioners should aim to secure resources that can be used to further analyse the feasibility of opportunities to generate new FMs. Almost all FMs can experience unexpected disruptions (e.g. tourism markets), and a diversified revenue base can help lessen these types of shocks.

In seeding and developing FMs, LSMPA practitioners must set realistic expectations for the time, resources and stakeholder buy-in which is usually required to successfully design and deploy a FM. These processes are usually highly consultative in nature, often require significant political will, and sometimes require new or amended policies/regulations. Understanding the level of effort required and the risk of success/failure against the potential 'payout' of various FMs can lead to more informed decision-making and better resource allocation strategies.

LSMPAs should systematically refine their plans towards financial sustainability and track their own progress towards achieving greater financial sustainability.

### 5.2.2 Pursue coalition-building and capacity development opportunities

LSMPA practitioners must gain a better understanding of their capacity gaps and the enabling conditions required to capture financing for their sites. Finance-related capacity development efforts should be prioritized as they are a critical and necessary part of establishing functional LSMPA FMs. Planning and budgets should explicitly include such capacity development efforts in order to ensure successful operations.

While LSMPA managers can seek opportunities to enhance their literacy in conservation finance principles and approaches, it is not always realistic to expect that LSMPA managers will have or will develop the internal capacity required to design and launch FMs. Some of the more complex FMs may require expertise across several disciplines (finance and economics, legal and policy expertise, scientific and conservation, etc.). LSMPAs will need to build broad coalitions of stakeholders to help galvanise the required capacity and resources to undertake FMs.

Most existing LSMPAs today are supported by coalitions of civil society actors, including large international conservation organisations. LSMPA managers must invest in building/engaging these types of support networks, as these partners often have the experience, technical skills and access to donors needed to help develop financing options.

### 5.2.3 Build the business case for LSMPAs and align with government targets

National governments will continue to be the most important stakeholders for financing LSMPAs. Managers must aim to identify and cultivate site champions and ocean protection advocates within their governments, ideally across numerous departments and agencies. LSMPAs need to invest a certain amount of resources annually in engaging policymakers, ideally (if possible) through arranged study tours/site visits to help build connection to a place.

As part of their research agendas, LSMPAs should adopt practices that can help build their business case to stakeholders such as governments and the broader public. For example, LSMPAs should make concerted efforts to align their goals/targets metrics with those metrics used and recognised by governments in budget planning.

Another important tool would be a valuation study of the ecosystem(s) to be conserved or sustainably managed by a LSMPA. Policymakers often greatly undervalue the contributions that essential marine ES provide to their societies. These types of analyses can help inform important policy/planning aspects of LSMPA design and can again highlight potential opportunities to derive financial value(s) from a site. Such valuations should also highlight the human well-being and non-economic values of an LSMPA, including cultural and spiritual values.

There is emerging research that shows a positive correlation between protection of the ocean environment and economic development (Brander et al., 2015). Being able to document the positive effects of LSMPA improvements in fisheries economics, community engagement, and job creation, can help managers speak to a broader constituent base across governments (e.g. fisheries agencies, ministries of finance/economic development, etc.) and the general public. LSMPAs should also be promoted as a cost-effective way to help countries achieve their ocean conservation targets – LSMPAs managed as a cohesive unit actually cost less on a per square kilometer basis than managing smaller, dispersed MPAs (McCrea-Strub et al., 2011).

## 5.3 Growing the field of LSMPA financing

### 5.3.1 Rethink the Scale of LSMPA Financing

The emerging field of LSMPA financing requires further definition and focus. There are still relatively few examples of high-impact, innovative and enduring FMs to support MPAs and LSMPAs. There needs to be more investment in exploring the value of services provided by large marine ecosystems, and quantification of the

benefits that healthy ocean ecosystems provide to the world's blue economies.

The type of scaling needed will likely require 'blended finance' approaches, which use public and philanthropic funding to attract private commercial capital into marine conservation efforts (OECD, 2018). Given the nascent state of private capital investments in ocean conservation, this is not a short-term fix. More research and development will be required to establish a pipeline of replicable blended finance project investments.

### 5.3.2 Enhance multilateral and regional approaches and efforts

Previous research has highlighted the gaps in financing for conservation (Credit Suisse & WWF, 2016) marine ecosystems (Bohorquez et al., 2019; Bos et al., 2014; Lennox, 2012; Lotze et al., 2011) and LSMPAs in particular (Lewis et al., 2017). Our review confirms these findings with all LSMPAs reviewed reporting shortfalls in funding. Given the current pace of threats to ocean ecosystems, and with recent calls-to-action stressing the need for up to 30 percent of global ocean territory to be conserved, a significant scale-up in the amount of financing to support global ocean health is needed. While innovative FMs are a key component in addressing this challenge, these alone are not likely to meet the financing challenge at scale. Along with these developments there must be a commitment by governments and public funders to develop or strengthen multilateral funding that focuses resources on supporting ocean protection and sustainable management in small island states and territories, developing countries and international waters.

Additionally, some of the countries and territories most important to large-scale ocean protection (e.g. Pacific Island nations) should form regional frameworks and alliances that strengthen collaboration across ocean protection regimes (e.g. Framework for a Pacific Oceanscape and the Blue Pacific concept). A shared commitment to ocean protection and LSMPA coverage could give partner countries a greater voice in international policy forums and increased bargaining power when competing for scarce international conservation funding.

# Finance Guidelines

## 6.1 Introduction

Below we attempt to set forth a brief and general set of guidelines for the development and implementation of financing for LSMPAs.

The guidelines presented here are concerned specifically with the development of financing for LSMPAs. As such, we take a slightly narrower project-based perspective in which financing is responding to a broader LSMPA development initiative. The more general LSMPA planning process, which should include diagnosis of threats and prioritisation of management activities, takes place alongside – ideally in an integrated and iterative fashion – the development of effective strategies to finance these conservation efforts. By taking this perspective, we hope to be able to provide a slightly simplified and more actionable set of steps tailored to practitioners seeking to develop and implement a financing strategy for an LSMPA.

We divide the LSMPA financing process into three simplified phases that mirror the arc of general LSMPA development:

1. Planning and design
2. Establishment
3. Operations

The first phase, financial planning, includes all of the activities and approaches related to the development of an LSMPA-specific financing strategy. Concerned primarily on financial flows, the financial strategy should be a comprehensive plan that assesses costs associated with LSMPA establishment and operations, identifies opportunities for cost reduction, assesses existing and new potential opportunities for funding and revenue generation including the identification of the FMs to be deployed and the manner and timing of deployment. An LSMPA financing strategy or plan may include several financing sources and mechanisms as needed to ensure that funding is available to match the scale and timing required. Behavioural, objectives, such as the mitigation of behaviours detrimental to conservation objectives or the encouraging of activities supportive of conservation outcomes, may be equally critical to overall conservation outcomes. However, these fall outside the scope of these guidelines, which are more narrowly focused on financial flows.

Just as the structure of LSMPAs themselves will vary from site to site with legal, social, cultural, geographic, ecological and other factors, so too will the process and products of financial planning for LSMPAs. This document is designed to be general in nature in order to account for the wide variability in contexts, and the resulting variation in financial planning processes and outputs. All of the steps and approaches highlighted below could be expanded and tailored to specific contexts and mechanisms. While these guidelines contain general information that is applicable to smaller scale MPAs and conservation finance more broadly, we have tried, where most appropriate, to tailor these guidelines to LSMPAs as the track record of experience in this area is more limited.

We hope this document can serve as a centralised starting point for those beginning the long journey towards sufficient and effective LSMPA financing. To the degree possible, these guidelines are structured sequentially to provide a clear pathway for practitioners seeking to develop and implement financing strategies for LSMPAs. We start by highlighting several fundamental principles that permeate the document and then continue onto stepwise guidance related to financial planning and design, the establishment of FMs, and operations. A brief summary is highlighted in Figure 2.



Monk Seal, Papahānaumokuākea. © NOAA



Figure 2. FM process for LSMPAs

## 6.2 Key principles for design and implementation of financing strategies

These guidelines present activities in a simplified sequential order. However, there are several themes that cut across almost all aspects of LSMPA financing. These key principles should be considered at each step in the design, establishment, and operation of LSMPA financing strategies. Given the wide variety of potential approaches to financing for LSMPAs, and to the specific financing sources and mechanisms which may be deployed, guidance tailored to all possible financing options is beyond the scope of this document, as is guidance tailored to all potential contexts. However, by applying these principles, practitioners can make great strides in tailoring and onboarding these general guidelines to their specific needs and circumstances.

### Prioritisation

Financial planning for conservation may in some cases be taken up as a discrete process or passed over entirely in the process of conservation development

and planning. Prioritizing the LSMPA financial planning process from the inception of overall conservation planning is key to ensuring effective financing for LSMPAs. This extends to sequencing – the alignment of financial planning with overall conservation planning, for example – as well as to allocation of resources, such as staff time, funding, and outreach and communications.

### Participation

LSMPAs, and the efforts to effectively finance them, must serve local constituents and fit within local contexts to the degree possible. The effective engagement of stakeholders across sectors is critical to overall success, as is the efficient facilitation of participation from these stakeholders in all the major facets of planning, establishment and operations of financing strategies and mechanisms.

### Good governance

Good governance is a broad category of practice standards that provides for effective operations and oversight and are critically important when dealing

with multi-stakeholder financing-related processes. Good governance includes standards related to transparency, inclusivity, as well as structural and procedural considerations.

### Capacity and Institutional Fit

Local context has profound implication for the eventual performance of financing strategies for LSMPAs, not only with regards to LSMPA design and costs, but also in relation to local institutional and individual capacities and skills. FMs that require specialised technical skills may fail in a context that lacks such resources. The structure and operations of LSMPA FMs must be tailored to match local capacities and institutions while, at the same time, deliberate capacity and institutional development efforts should be undertaken to ensure that local human and institutional resources can accommodate selected mechanisms.

### Technical Accuracy

Planning and operational objectives must be based on realistic and technically sound analysis and information; and the design and operation of financing strategies and specific mechanisms should effectively deploy and build on robust technical information and methods.

The key principles highlighted above are threaded throughout the sequential guidelines below.

## 6.3 Planning and design of financing strategies

### 6.3.1 Start early

Financial planning should begin simultaneously with LSMPA design and planning. Many MPA and conservation practitioners focus first on the design of conservation areas and operations and then seek to develop financial strategies to support those plans. This approach may limit the time and resources available for financial planning processes and prevent the robust consideration of financing – conservation costs and funding – in the process of conservation planning. Delaying critical decisions regarding the sources and scale of funding required can derail future MPA operations and fundraising efforts.

#### 6.3.1.1 Clear project plans

LSMPA planning and design timelines should articulate financial planning activities and milestones as well as general planning milestones. Outputs of traditional LSMPA planning include, for example,

a PA management plan. This should be paired with a “business plan” that lays out the financial needs, revenue sources, and gaps in financing and approaches to fill gaps.<sup>7</sup> Detailed project timelines and plans related to the development and establishment of financial strategies for LSMPAs are critical to ensuring that adequate processes are put into place and completed on a schedule sufficient to meet overall LSMPA financing and operational objectives.

### 6.3.2 Stakeholder Engagement and Outreach

The establishment of LSMPAs has impacts on, and requires inputs from, a wide variety of stakeholders. Efforts must begin early to raise awareness and build partnerships across the public sector, private sector, and civil society. Systematic and structured engagements with key stakeholders are critical to ensuring buy-in from key partners and to the development of plans that take account of critical perspectives. In preparation for such socialisation activities, strategic communications materials should be prepared that highlight the benefits of the LSMPA initiative for the relevant stakeholders and also realistically indicate the potential costs of such efforts.

At an appropriate stage, assessments of the relevance of potential FMs to each stakeholder group – the roles for, costs and benefits to, and impacts on actors in each sector – should be socialised and discussed with key partners from each sector. In some cases, specific FMs may need to be developed to compensate a specific set of stakeholders whether that be local communities that maintain traditional rights over conservation areas, or private sector interests that claim losses from conservation efforts.

#### 6.3.2.1 Public sector

Governments are the natural stewards of public goods and play a key role in developing and implementing conservation efforts. This is particularly true with LSMPAs where the conservation effort may cut across communities and jurisdictional boundaries, have broad impacts, and require significant resources. Partnering with key government leaders and managers from inception is critical to ensuring that a productive working relationship is developed and that a shared understanding is collaboratively developed regarding the costs and benefits of planned LSMPA operations, as well as FMs and sources. This includes outreach to key government finance and administration staff. Practitioners should aim to bring government leaders together from across the various line agencies and jurisdictions at an early stage in order to develop a

<sup>7</sup> The term “business plan” is common in conservation finance, but such plans can vary widely and many have little resemblance to private sector business plans. The key component of conservation business plans for the purposes of this discussion is a clear and viable financial plan for a given LSMPA. A number of resources for conservation business plans can be found online (see The Conservation Finance Alliance <https://www.dropbox.com/sh/h5xb8vlg6tyvif/AABjU4MSEWqorDyqFIN00RZMa?dl=0>)

collaborative vision and work plan. It is important to have a general understanding of government budgeting and funding when entering such discussions.

### 6.3.2.2 Private sector

The private sector is another key constituent in the development of LSMPAs. Corporations and their staff, small business owners, and entrepreneurs, may all face a variety of costs and benefits resulting from LSMPA development. LSMPA financing strategies may rely on direct private sector funding, or otherwise impact private sector business by increasing operating costs, for example through permitting or license fees, or by increasing costs to a business's clients, for example through the use of tourism entry fees.

### 6.3.2.3 Civil society

Perhaps most critically, the costs and benefits associated with LSMPAs, and the operations of financing strategies and mechanisms must fit with local communities and civil society. Efforts from the earliest stages should be made to reach out and develop partnerships with civil society organisation and leaders from both the national and local level, while also prioritizing local communities that will be most directly impacted. Government budget allocations and other LSMPA FMs may have significant impacts on local communities and civil society, and perceived misuse of funds can quickly lead to strong opposition. Support from civil society and local communities is a critical and enabling condition for the successful development and deployment of an LSMPA financing strategy.

### 6.3.2.4 Structured engagement

Formalising and systematising collaboration across sectors can help to strengthen and streamline engagements with stakeholders across sectors. The development of a cross-sectoral LSMPA financial advisory committee can facilitate feedback and ownership and provide greater transparency to outreach efforts. Care should be taken, however, to structure such bodies effectively and to prevent elite capture. Practitioners must recognise that each sector is not a monolith and that sectoral leaders may not necessarily represent all, or even most, of their peers. The identification of participants in a such a body, and in the selection of partners and champions more generally, should consider the expertise, influence, integrity, and seniority of the individual, among other characteristics.

Regardless of the specific contours of stakeholder engagement, the approach should be robust, systematic, and structured. Meetings should be held in such a way so as to provide ample opportunity for all participants to contribute, and notes from meetings should be captured and circulated, while key decisions

may merit wider publication. Open calls for participation and input may also be a valuable measure to ensure that all stakeholders have an opportunity to contribute. While it may appear sufficient to provide a single point of contact with key stakeholders, repetition of such processes is often critical to ensuring key messages are socialised and that participants have ample time to reflect and provide input. Finding approaches to frequently and efficiently liaise with key stakeholders is a difficult but important challenge.

### 6.3.3 Dedicated resources

The process of financial planning for an LSMPA – the activities, schedule, roles, outputs, and milestones – should be clearly articulated in relevant project planning and management documents, and these activities should be allocated sufficient human and financial resources. LSMPA planners should not expect to take on financial planning alongside general LSMPA design and planning without also allocating additional resources to ensure sufficient focus is given to this time consuming and technically challenging task. Below we take a brief look at the human and financial resources that may need to be marshalled to ensure the successful development and implementation of LSMPA financing strategies.

#### 6.3.3.1 Human resources

Effective financial planning for LSMPAs requires dedicated focus from key actors and staff. This should include:

- **Leadership:** leadership within relevant organisations should recognise the importance of the financial planning process for LSMPAs to the overall success of LSMPAs. In addition, it is important that program leadership understand the time, resources, and steps involved in the financial planning process. This is critical to ensuring that the proper focus and resources are brought to bear during financial planning.
- **Management/Coordination:** staff charged with leading or coordinating financial planning for LSMPAs should benefit from clear instruction, potentially including the articulation of relevant responsibilities in written job descriptions and job responsibilities with preestablished outputs against which performance can be monitored.
- **Technical Expertise:** in addition to overall leadership and coordination, effectively designing and implementation and financing strategy for an LSMPA will necessarily require the utilisation of technical expertise specific to the assessment of financing needs and identification of potential strategies to address these needs. This includes the capacity

to develop and analyse cost and revenue projections, for example. This expertise can be acquired through the addition of staff with such skill sets, or the engagement of civil society and specialised contractors. The inclusion of some domain knowledge and experience within core staff is an important measure to ensure that concepts and approaches related to LSMPA financing is effectively mainstreamed within the appropriate institutions and processes. However, it remains likely that additional specialised resources will need to be brought in during key phases of the planning process. These resources can be engaged as independent contractors. A clear scope of work should be developed for contractors, highlighting outputs that adhere to the timeline and milestones included in the overall LSMPA planning process.

- **Other specialised expertise:** outside of specific technical skills, staff with expertise and experience on a wide array of related subject will need to be deployed. It is essential, for example, that there is staff capacity to understand and manage the legal and policy elements of FMs, and to continue to follow changes in all relevant laws and regulations. This may be accomplished with help from other agencies or partners. Skillsets and experience pertaining to the facilitation of effective stakeholder engagement and in developing communications strategies, among others, will also be needed.

#### 6.3.3.2 Financial resources

Dedicated financial resources to support a deliberate, structured, and rigorous financial planning process is critical to long term success. Practitioners can highlight the importance of early and systematic financial planning to their funding partners. Here again, financial planning should not be pitched as a secondary or supporting measure, but rather, as a core facet of LSMPA development that is critical to long term success. LSMPA development plans and budgets should take account of the processes, activities, analyses, and expertise that may need to be brought to bear on the project. While all funders should recognise the importance of this work stream, philanthropic funders in particular may have the appetite and interest to fund such activities, recognizing the critical nature of such activities to long term success.

#### 6.3.3.3 Other resources and expertise

More broadly, practitioners should seek to leverage all other available resources, including online tools and guidelines. Among others, practitioners may benefit greatly from developing partnerships with other LSMPAs nationally or regionally that may share

characteristics. Such relationships can be a source of valuable guidance and lessons learned. This could not only help refine the FM, it could initiate the process of adoption as an effective FM to the field more broadly. These relationships can further lead to sharing of resources or more structured partnerships, the benefits of which can easily compensate for staff time allocated to relationship development and management.

### 6.3.4 Integration with other processes

LSMPAs have implications for stakeholders across sectors and provide benefits both local and global. In order to best mainstream LSMPA development and put costs in the proper context, LSMPA financial planning in particular should be paired and integrated with other related planning processes to the degree possible.

#### 6.3.4.1 LSMPA planning

As discussed above, financial planning for LSMPAs should begin in concert with general planning and design for LSMPAs. In addition to aligning schedules, however, it is the integration of the two processes that yields improved outcomes. General LSMPA planning should have clear objectives. However, those objectives, and more so the approaches used to meet those objectives may need to be adjusted to take account of available financing. General LSMPA planning processes should consider the opportunities and limitations related to the scale and timing of financial flows as these become clear. Likewise, financial planners must consider the achievement of core LSMPA objectives when developing best-case and worst-case financing scenarios. This is an iterative process that functions best when both are integrated and communications between key staff is frequent and clear.

#### 6.3.4.2 Public sector planning and budgeting

As the natural stewards of public goods, governments justifiably provide the largest tranche of financing for LSMPAs worldwide. Coordinating financial planning for LSMPAs with relevant public sector budgeting processes is often a key step in successfully developing and financing LSMPAs. The alignment of these processes provides a critical opportunity to make public sector officials aware of the cost requirements of LSMPA operations, while also communicating the benefits of those operations. This is also the appropriate opportunity to collaboratively refine (or establish) the core costs that can and should be borne by the public sector and identify FMs through which such financing should be channeled.

It is important to note that the process of effectively engaging with government budgeting exercises extends well beyond attending a few meetings. Part of

the broader LSMPA planning process should include the development of partnerships with governmental institutions and the cultivation of champions within the government. Similarly, effectively informing public budgeting processes requires socialisation of key concepts and information. Effectively leveraging government funding may also require the development and passing of a suite of regulatory measures, ranging from official declarations, to signing of standard operating procedures, to the creation of entirely new governmental institutions.

#### 6.3.4.3 Marine spatial and use planning

It is also critical to coordinate LSMPA planning with broader marine policy and planning. In general, this helps to ensure that seascape spatial and use planning is aligned and helps to avoid a situation where different sectoral agencies develop conflicting and overlapping plans, a common challenge in spatial planning more broadly.

Integrating LSMPA financial planning with broader seascape planning also puts the costs of LSMPAs into the relevant and proper context. LSMPAs are a public good and, examined discretely, have limited direct revenue generation capacity. However, conservation is critical to ensuring the sustainability of significant stores of natural capital and underpin much marine-based economic activity. Conservation is more accurately viewed, and communicated, as a critical management tool that complements and enables other management and extractive activities. When examined holistically, alongside fisheries, mining, shipping and other marine activities, conservation is more appropriately framed as a management tool with direct and indirect benefits to local economies, markets, and communities.

LSMPA Managers should also try to integrate their management regimes into the wider framework of national resource management programs or networks of relevant (either in proximity or purpose), smaller scale MPAs if at all possible. If the overarching national policies and processes do not yet support this level of integration, opening up dialogue around the long term possibilities would be wise. Not only does this approach allow for LSMPAs to leverage their unique benefits and help in justifying budgets, more is likely to be gained from each dollar spent and this can open up additional sources of funding.

#### 6.3.5 Financial analysis

Financial planning for LSMPAs (and likewise for conservation efforts more broadly) can benefit from a variety of tools and methods to assess costs and

financing needs as well as identify potential sources of funds. Below, we briefly describe, in general terms, a comprehensive technical planning process, though which we recognise that other approaches may be equally robust, or perhaps more or less appropriate in particular scenarios. While many of the processes discussed here can be undertaken by individuals with a general level of competence across the required disciplines, specialised expertise may be helpful or even required for particular processes. Moreover, some of processes describe here can be quite resource intensive. The allocation of sufficient contractor or staff time is important to ensure tasks are tended to adequately and do not end up overstressing staff that may be tending to a variety of competing priorities.

There are several ways to develop an understanding of current and future potential LSMPA costs and revenues.<sup>8</sup> Some approaches may rely on categorisation of generalised costs and revenues associated with various activities (“activity-based costing”). LSMPAs, and efforts to finance LSMPAs, however, have a limited track record and so there is limited existing information on activity costs to utilize for such an approach.

Here we describe a rigorous and bottom-up cost-modelling approach to understanding LSMPA activities and dynamics, and to modelling LSMPA costs and revenues. Cost and revenue modelling can vary in complexity, but most utilizes spreadsheets to collate detailed data inputs and project costs and revenues over time. Rigorous data collection will likely include desk-based research, review of key documents, and interviews with LSMPA leaders, managers, and field staff, along with other key stakeholders.

Regardless of methodology, however, all such analyses must take account of local context through a systematic landscape assessment.

Below we provide an overview of this technical planning process broken in to four parts: landscape assessment, data collection, cost analysis, and revenue analysis.

#### 6.3.5.1 Landscape assessment

The development of an LSMPA financing strategy, and the selection of FMs must consider, and fit into, local, regional, and national contexts. At minimum, a basic understanding of this context, across sectors, is needed for effective LSMPA financial planning. Potential areas of inquiry for a basic landscape assessment are as follows.

#### Public sector

- Stakeholder and institutional mapping, including identification of finance and conservation related agencies and decision-makers
- Public revenues by source
- Public expenditures and budgeting processes
- Strategic plans and priorities
- Financial regulatory environment
- Capacity, particularly for finance-related institutions

#### Private sector

- Stakeholder and corporate mapping
- Primary sectors and industries by revenue and employment
- Capacities
- Key obstacles and opportunities

#### Civil society

- Stakeholder and institutional mapping: education, labor, community, advocacy, etc.
- Capacity, education
- Employment and livelihoods
- Traditional practices and beliefs

The scope and depth of a landscape assessment will depend on local context, the resources available to conduct the assessment, among others. At a

minimum, a landscape assessment should aim to answer questions of critical relevance to LSMPA financing such as the mapping and basic assessment of agencies, boards, and individuals that are responsible for decision making related to financial management, revenue generation and expenditures; and the identification of opportunities to generate funding for conservation activities based on policy or strategic priorities, or value of such resources to each stakeholder.

The assessment should be tailored to the relative scale of the LSMPA and its impacts, which can vary significantly depending on context. A landscape assessment to support financing for a US-based LSMPA, for example, need not to take stock of vast number of unrelated economic activities, public policies, and strategic priorities, and can instead focus on national and local governance related to LSMPA management as well as private sector and community interests that have a direct stake in LSMPA development and operations. Conversely, LSMPA development in a small Pacific Island nation, such as Kiribati or the Cook Islands, may have impacts that penetrate through breadth of public sector budgeting and policy, private sector activity and community interests. The breadth of a landscape assessment will also depend on resources available.

#### 6.3.5.2 Horizon

We recommend the projection of costs and revenues over a ten- to 15-year time horizon. This enables



*Opini, Papanānaumokuākea. © NOAA*

<sup>8</sup> BIOFIN highlights five approaches to costing – Incremental Budgeting Approach, Historical Projections, Cost Modelling, Activity-Based Costing, and Results-Based Costing (UNDP 2018). This document provides guidance on a cost modelling approach, common for project-based costing.

financial planners to account for the changing cost profile that accompanies the progressive stages of LSMPA development, from planning to establishment and finally to operations. A ten-year period also offers a window sufficient to examine processes associated with revenue generation and, if appropriate, the accumulation of funds through fundraising and utilisation of return-seeking investment instruments. A five-year projection period may be sufficient, particularly if the LSMPA is already entering a phase of steady state operations – meaning annual LSMPA operations will not change dramatically over time. A longer period, such 20 years, may also be useful in particular scenarios, though caution should be taken as the ability to build realistic scenarios and predict future events decreases over such long-time horizons.

### 6.3.5.3 Data collection

Below we describe in general terms a typical data collection effort that could be employed to effectively populate an LSMPA cost and revenue model.

#### 6.3.5.3.1 Tools

In order to facilitate the effective capturing and organizing of information, a number of tools can be developed and utilised.

**Frameworks:** if developed these layouts can provide the basic structure of financial information and the various parameters and classifications to be utilised. It may be beneficial, for instance, to classify costs in a variety of ways, potentially pertaining to stage of development, budget category and LSMPA function. Such a framework can then be used as a reference throughout financial and general LSMPA planning.

**Financial Model:** a master worksheet can be developed to efficiently house all data related LSMPA costs and revenues. Such a tool can be tailored for the purpose by aligning the worksheet with the framework, or directly with the priorities of local managers. This may include design features that enable data input to be identified sequentially or by LSMPA function or budget category.<sup>9</sup>

**Data collection sheets:** in order to better facilitate the initial capture of data, a data collection sheet can be easily developed and deployed. Such a data collection sheet can include prompts for the item name, cost, timing and frequency, quantity, and allocation to various predetermined identifiers.

**Interview guides:** essential tools that should be developed to ensure that interviewers manage discussions in a structured way and tend to all required areas of inquiry.

#### 6.3.5.3.2 Training

Training data collection staff is necessary when data collectors have little or no experience with data collection for bottom-up costing initiatives. Training involves several steps, starting with a review of the overall costing initiative, including background, objectives, and design. Next, the costing framework is reviewed. A thorough exploration of the framework is required to ensure that the overarching structure of the cost analysis has been socialised and that specific data requirements are clearly linked to broader cost categories.

Data collectors must then familiarise themselves with the various worksheet and data collection sheets, or whatever various tools are being utilised. Data collectors should then be trained on the data collection process, discussed below.

#### 6.3.5.3.3 Process

Data collection can require several processes depending on the stage of the project being assessed. The first step is often a review of project design documents. This may include management plans, budgets, staffing plans and related documents. These documents provide key insights into project design, strategy, and costs, and are often critical in enabling resource efficient project costing. Project design documents and management plans can be used to align project activities with the costing framework. Project budgets, budget tracking, financial statements, and other financial records can be of particular utility in understanding overall cost structure and in populating the model, if these are available and structured appropriately.

Project design documents may not be available if the project is in the early stages of development, if poorly organized, or if project proponents prioritise confidentiality. In such cases, project costing can be significantly more challenging and resource intensive.

Review of project documentation and budgets, if available, is then often followed by several rounds of interviews with key stakeholders. The first set of interviews is usually conducted with senior level project staff. These discussions are used to introduce the costing initiative and process in greater detail and to gain a deeper understanding of the overall design, strategy and structure of the project being costed. The interviewer should seek to define or confirm the basic steps in the timeline of project development, and the basic functions of the project being examined. These are then reconciled with the original draft project

framework. Interviews with senior level staff are also used to review any data or information received in project documents in order to confirm that such documents are accurate and are being interpreted correctly. Finally, interviewers should work with project leaders to develop a strategy and process for data collection, ensuring that referrals are made available to key staff with knowledge of field-based costs and activities, such as field managers and finance managers.

Additional relevant documentation may be made available throughout the interview process. Finance managers, for example, may have access to budget and expenditure records that can be a critical source of information. Even with such documentation, however, follow up interviews will likely be required in order to assimilate such data with the formats and classifications required, and to assess data gaps.

The next round of interviews may be held with field managers to better understand specific field-based costs. After introducing the costing initiative, process, and approach, the interviewer can use the model itself or data collection sheets to collect specific cost data inputs. The interviewer may be required to work with the interview participant to establish unit definitions and to translate the participant's colloquial terminology and informal knowledge into the desired structure and unit-basis.

Finally, field managers may refer the data collector to other staff with knowledge of particular project activities and costs. In many cases, this cycle of data collection, referral and review must be repeated several times. Reliable data collection requires patience and persistence in arranging meetings with key project staff, talking through the nuance of project costs with key staff, and obtaining references to other relevant project officers; taking the time to use available data to either construct new costing data or deconstruct existing costing data for inclusion in the model; verifying data; and repeating the process until all data has been collected and verified.

Once a complete set of data has been gathered and input into the model, data collectors can return to project leadership to ensure that the bottom-up cost data is in line with overall project strategy, plans, and budgets.

#### 6.3.5.4 Cost analysis

Different approaches to analysing costs may be suitable in different contexts. Generally, some analysis of costs over time is needed to identify and adequately plan for volatility in revenues and expenditures and gain insights into key cost drivers, growth in revenues and gaps between the two.

#### 6.3.5.4.1 Classifying costs

In order to better understand cost drivers and how funds will be used, it is useful to categorise costs using one or more classifications. These could include fixed and variable costs, capital expenditures and operational costs, budget category such as personnel, and LSMPA functions. Other more tailored classifications may be useful depending on the context.

Two common classifications of costs include budget category and LSMPA function. Budget categories commonly include personnel, contractors, supplies, assets, and travel. LSMPA functions depend more on the specific LSMPA-related objectives and activities which may vary more than budget categories. Functions could include surveillance and patrol, biological monitoring, education and outreach, administration and finance, policy and planning and others. Assigning such classifications to costs enable financial planners to better analyse and understand costs, better communicate the utility of particular expenditures, and make more informed recommendations about how and where to reduce or increase costs. Costs allocated to personnel for example, serve as a source of economic and livelihood support for local communities and practitioners, and policymakers may have greater motivation to avoid cuts to these costs. An understanding of which LSMPA functions are critical to achieving priority objectives can likewise inform assessments of which costs are mission critical.

### Common cost classifications

#### Capital Expenditures and Operating Costs—

Capital expenditures are required to purchase or develop a specific asset, while operating costs are those associated with ongoing implementation of work plans

**Budget categories—**Identifies cost by the physical nature of the item – personnel, occupancy (cost of operating offices), contractor costs, and others.

**Function—**Classifies costs within key LSMPA management activities, such as surveillance and patrol, biological monitoring, education, and outreach, etc.

**Fixed vs. Variable costs—**Variable costs increase with management activities, such as the fuel costs for patrol operations. Fixed costs remain unchanged regardless of level of activity, such as office utility costs.

<sup>9</sup> Examples of a financial model and framework can be found in Supplementary document 2. BIOFIN also provides examples and guidance related to cost categorisation and modelling (UNDP 2018).

#### 6.3.5.4.2 Costs over time

Understanding cost profiles over time is vital to ensure that adequate financing is available when needed. LSMPAs may go through different stages or processes, each with different financing needs. A common and simple phasing of LSMPA development includes planning, establishment, and operations.

#### Planning costs

Costs incurred during planning phases will likely include costs related to travel, staff, meetings, and third-party expertise required to facilitate LSMPA design and zoning, and management planning, as well as costs associated with policy outreach and general communications efforts. LSMPA planning and design phases can stretch over several years and activities taken up during this phase may stretch through the establishment and operations of the LSMPA.

#### Establishment costs

The establishment phase of the LSMPA development may be characterised by a spike in costs. This can be due to significant capital expenditures that might be required to effectively set up an LSMPA. Capital costs result from the acquisition of durable goods such as land and marine vehicles, and equipment for field and office. This may also include the construction or renovation of offices and field stations.

#### Operational costs

Operational costs will include the costs of implementing LSMPA management and work plans. Primary cost drivers during the implementation stage might include the personnel, fuel, and travel expenditures needed to implement ongoing surveillance and patrol activities, communications, outreach and education, biological and resource use monitoring, or other activities. Operation of LSMPAs can pose unique challenges, often due to the size and remote location of the area under management, which can lead to outsized costs, along with the financial and human capacity of local governments. Care should be taken to understand the various approaches that could be utilised to achieve desired outcomes. Wherever possible, the costs related to a variety of strategies and approaches that can be utilised to achieve a desired outcome should be ascertained and used to develop a robust scenario analysis (see revenue analysis section below).

#### 6.3.5.5 Revenue analysis

Another critical component of the financial analyses required for effective financial planning is analysis

of existing and potential revenue sources and mechanisms. Key data on existing revenues that support conservation efforts might be accessible through the methods described above – review of relevant documents and interview-based data collection. Understanding the potential for growth of existing revenues, or development of new potential revenue sources is equally important. Financial planners can look to established taxonomies of conservation FMs<sup>10</sup> to ensure the analysis is inclusive but each must be assessed for its ability to generate and channel revenues that match the need and work in local context. Assessment of potential financing sources and mechanisms should include attention to:

- Scale of cash flows
- Timing of cash flows
- Setup and transaction costs
- Governance and participation
- Accessibility
- Durability
- Capacity requirements
- Contextual fit and adaptability
- Risks

The above assessment of potential FMs should then be paired with the costing profile to better understand the capacity of a given financing portfolio to support the achievement of LSMPA objectives. It is unlikely that any projection of revenues will meet both the timing and scale of projected required LSMPA funding. An iterative process should be undertaken in which both project costs and revenues are reconciled (see below). Note also that a single FM will usually be insufficient to meet all the financing requirements of an LSMPA and that diversification of FMs likewise diversifies risk associated with any one FM increasing overall resilience of LSMPA financing.

The assessment of potential FMs must also be analysed with reference to the landscape analysis discussed above. Examining the characteristics of each FM – the legal and capacity requirements, social and cultural fit, etc. – is essential for understanding obstacles to, and opportunities for, success. Note that here again, a simple comparison may be insufficient. Rather, efforts may be needed to adapt FM design and operations or, conversely, address contextual policy and capacity gaps (for example), to address obstacles and better ensure contextual fit.

#### 6.3.5.6 Developing a shared vision and ensuring contextual fit

While technical analyses depend on data inputs, perhaps more important is ensuring that analyses and recommendations conform to a shared vision for conservation priorities and will be viable in the local context. Achieving these objectives requires the engagement of a broader group of stakeholders. Numerous stakeholders across sectors should be engaged through the financial planning process. Focus group discussions are an important tool in this and can help facilitate accurate costing, revenue assessments, and the recommendation of FMs that best suit local characteristics.

#### 6.3.5.6.1 Conservation priorities and scenario analysis

A critical step in effective financial planning for LSMPAs is understanding conservation priorities. A clear awareness of the relationship between specific conservation activities to the achievement of targeted conservation objectives enables financial planners to prioritise such activities and provide insights related to the impacts of limitations on available funding. Broad agreement that surveillance and patrol activities, above all else, are required to achieve central conservation outcomes enables financial planners to provide a tailored and dynamic set of recommendations that can facilitate success in an environment of limited resources. Focus group discussions with local conservation leaders and global experts can be a critical tool in understanding these priorities and in differentiating the “must-have” activities without which core objectives cannot be met, and those activities which are important but are not critical to core objectives.

This type of prioritisation allows financial planners to develop several scenarios which may be advantageous in an environment with unknown financial resources and a myriad of, potentially conflicting, stakeholder perspectives. Scenario planning could include an “optimal” scenario in which all desired conservation activities are implemented, and which requires greater levels of funding, and a “minimal” scenario which still achieves key objectives while perhaps sacrificing some desired outputs and which requires a more realistic level of funding.

Due to pressing demand, and the interrelated nature of development planning, planners may in some cases wish to include more general infrastructure items in LSMPA development plans. These items may include construction of piers and jetties, tourism lookouts, airport improvements, waste facilities, and others. In some cases it may be appropriate to include such items, particularly when they are core to basic LSMPA operations, however, this practice can lead to quick and significant aggregation of costs that are not core

to LSMPA operations and which can derail LSMPA financing and development. Making challenging decisions about what costs are mission-critical and those that might be decreased or eliminated, in order to match a viable financing plan is at the heart of financial planning for LSMPAs.

#### 6.3.5.6.2 Socialisation and contextual fit

Focus group discussions are also valuable in ensuring that LSMPA FMs are supported by local stakeholders and fit within the local context. Focus group discussions with local leaders can be a venue to gain inputs and perspective and ensure that recommendations reflect this perspective. In doing this, financial planners can ensure that decision makers and leaders buy into recommended financing strategies and that these strategies can function effectively in the local context.

In addition to consultation with local leaders, financial planners should conduct rapid analyses of local context to include:

- Political environment and risks
- Legal, policy and regulatory context
- Economic conditions
- Social issues and human resources/capacities
- Cultural norms and practices

Such an analysis should likewise inform recommendations related to FMs, helping to ensure that the options selected will succeed in context.

## 6.4 Establishment of financing mechanisms

Once planning has been completed, practitioners can move to establish FMs. While for the purposes of analysis and discussion, the phasing of LSMPA development is treated as linear and neatly sequential, in reality, the phases of development as presented here overlap and interact in dynamic ways. While the track record of LSMPA finance is limited, evidence from such efforts and from other sectors clearly illustrate that the establishment of FMs can span over several years. These processes will also require multi-disciplinary and collaborative efforts to ensure that enabling conditions and operations are put soundly into place.

This document is neutral regarding the specific FMs utilised and attempts to provide general recommendations for the establishment of a broad array of FMs. Guidance below should be adapted and refined for use in context.

### 6.4.1 Policies

While cases in which policy and regulatory measures

<sup>10</sup> A taxonomy of LSMPA-related FMs is included in section 3.3 of this report; see also *Conservation Finance: A Framework* (Meyers et al. 2020). For more information: *BIOFIN Workbook 2018*. See [https://www.biodiversityfinance.net/sites/default/files/content/publications/BIOFIN%20Workbook%202018\\_0.pdf](https://www.biodiversityfinance.net/sites/default/files/content/publications/BIOFIN%20Workbook%202018_0.pdf) *BIOFIN Catalog of Finance Solutions*. See <http://biodiversityfinance.net/finance-solutions>

are not required, the vast majority of conservation FMs will require specific policy and possibly regulatory measures. This is particularly true in the context of LSMPAs in which the scale of financing significant relevant to most other conservation efforts.

Policy and regulatory measures may be required for a variety of needs, such as:

- Allocate general public funds to support LSMPA establishment and operations;
- Establish or strengthen regulations regarding specific fees, taxes, fines, etc., that will generate funding for LSMPA establishment and operations;
- Execute public FMs such as a DNS or the issuance of green bonds;
- Establish national level FMs such as a national CTF to support LSMPAs; and
- Establish, structure, and operate any governmental or quasi-governmental institutions that may be needed to effectively generate, management, and distribute funding.

Once FMs have been identified, practitioners should develop a map outlining the policies required to implement such a FM, the basic content of those policies, relevant government bodies, and the optimal schedule of development. This can then be used to develop policy-related workplans and schedules and ensure timely completion of policy-related objectives.

The policy and regulatory development process will vary from country to country but in all cases will require close partnership with public sector policy makers. Practitioners tasked with developing the enabling regulatory environment for FMs should familiarise themselves with the local policy-making procedures

and develop relationships with the relevant public sector executive, technical, and legal staff in order to better facilitate support and endorsement for policy recommendations (see Planning and Design above). In-country actors with relevant exposure and experience can facilitate the development of such relationships.

Practitioners should also familiarise themselves with the general structure of local regulations and policies, into which all new regulations must fit. In most cases, regulations should refer directly to laws and policies that provide the relevant legal basis. For instance, regulations establishing tourism entrance fees may need to refer to policies that provide the governing body with the legal authority to create such fee structures, as well as policies that set forth priorities that support and align the LSMPAs and their financing. The structure of the regulation – format, content, language, etc. – should also follow common practice and build on precedent. Policies should also be formulated to achieve the intended objective. Care should be taken to ensure regulatory language is sufficiently clear so as to avoid misapplication or misinterpretation. Much of this can be facilitated by partnering with in-country actors that have specific legal and policy analysis expertise.

Finally, those responsible for drafting regulatory language should likely consider transparency and oversight, and gender mainstreaming, among other best practices. Measures that ensure transparency and oversight are critical to avoiding misuse or abuse of intended FMs. In addition, attention to gender mainstreaming or other demographic considerations can ensure that benefits of regulated FMs are not captured by any special interest or demographic subgroup.

Political risk is a significant factor in the timely development of policies required for LSMPA FMs.

Political dynamics can change rapidly with election cycles, economic crises, or political expediency. Financial planners should institutionalise policy-related work-streams as much as possible and develop a broad coalition of government champions. Bringing in senior executives from other partner institutions – foreign governments, large NGOs, or civil society organisations – may help to generate the required attention from senior level officials. Election and campaign periods may be particularly challenging, and planners should take account of such periods, along with major national and religious holidays, as potential gaps in policy development work plans and schedules.

#### 6.4.2 Institutions and operations

Central to the establishment of FMs is the development of the required institutions. Such institutions could include governmental bodies, corporation or associations, NGOs, committees, or others that play a role in the collection, oversight, distribution, management, and delivery of funds.

The process of developing institutions is time and resource intensive. FMs that require the development of numerous new bodies or institutions should be treated with caution. Effectively establishing new institutions may require intensive and collaborative efforts across stakeholders along with multi-disciplinary expertise and it may be several years before new institutions are able to both smoothly and independently.

As with policies, institutions should be designed with particular consideration to legal context, institutional objectives, transparency and oversight, and inclusion, among others. General considerations related to each of these are highlighted in the table below.

#### Design and establishment

- Appropriate legal pathways used to establish institution
- Institution abides by all legal requirements and maintains all required documentation

#### Institutional structure and personnel

- Structure and positions abide by all related laws and regulations
- Institutional structure tailored to primary objectives
- Personnel have skills, knowledge, expertise, and interest to fulfill roles
- Personnel roles and responsibilities clearly articulated and communicated
- Leadership and key staff maintain positive relationships in their sectors

- Personnel represent, to the degree possible, relevant demographic groups, including diverse gender, religious, ethnic representation
- Formally recognise committees or bodies to provide oversight, advisory, stakeholder representation and technical expertise if/as needed
- Remuneration, if needed, fairly compensates personnel for level of effort

#### Policies and procedures and plans

- Clear operational plan and budget
- Clearly articulated mission and vision, reflected in strategies and work plans
- A clear and comprehensive operations/procedural manual that details general operations, decision-making protocols, etc.
- Procedures based on best practice that prioritise transparency; financial management and accounting procedures, conflict management and resolution, among others.
- Undergo regular, third-party audits

There is often a significant role for governmental entities in LSMPA-related activities, and this will likewise be true for management of taxes, fees, fines, and other revenue generated by the public sector. However, third party funding, such as philanthropic or market generated funds, are best managed independently of government institutions to avoid perverse incentives and opportunities for diversion, though adequate government representation and support remains critical. Any non-governmental oversight body should aim to engage an inclusive array of stakeholders without affording any single stakeholder or stakeholder group greater representation or authority than another.

An analysis of institutions roles, and the typology of available institutions and their advantages and limitations will be needed to select the most appropriate structures. While the appropriate expertise, skills and capacities should be sought, and capacity development measures deployed, it is also important to tailor FMs, institutions, and procedures to the local context. This may mean adjusting periods of activity and procedural specifications, or simplifying and streamlining procedures, roles, and responsibilities.

The development of clear operating procedures is a critical aspect of ensuring smooth and transparent functioning of LSMPA FMs. An operations manual containing a full suite of standard operating procedures provides the bedrock for LSMPA FM operations. These procedures should prioritise efficiency, transparency, and oversight, and clarify decision making protocols,



The minke whale, lesser rorqual, is a species complex of baleen whale. © Parks Australia

authorities, and limitations on those authorities. Such procedures should also tent to the day to day activities of the institution, articulating best practice approaches to the management of communications, staff, meetings, and conflicts, as well as clear procedure for financial tracking and management, among many others.

#### 6.4.3 Capacities

FMs often require specialised skill sets and dedicated financial and human resources. Many LSMPAs are established in remote and underdeveloped areas where such resources can be lacking, creating a significant barrier to effective operations. Practitioners must carefully consider local contextual characteristics in the selection and design of FMs. At the same time, robust capacity development efforts should also be undertaken to ensure that individuals with roles either directly or indirectly supporting LSMPA FMs have the awareness, skills, and knowledge to effectively execute those roles.

Capacity development efforts should tend to the following needs and requirements:

- Socialisation and awareness raising: Make key partners and personnel, aware of the critical need for LSMPA FMs; FMs structure and operations, source and utilisation of funds, and benefits derived.
- Training for decision makers and oversight: Decision makers must be educated on their role, decision-making protocols, and other standards for engagement. Likewise, these individuals should be provided with the background and domain knowledge as well as technical awareness, required to facilitate effective decision making.
- Technical skills training: Provide specific technical and skills training as appropriate for individuals. This may include approaches to the collection, tracking, documenting, investing, managing, and distributing funds.
- General knowledge and skills training: All relevant personnel should be trained on their respective roles and how these work in the context of the broader organisation and LSMPA FM. Most management and leadership personnel will benefit from training on more general skills such as work and budget planning, financial management, personnel management, conflict resolution, and others.

## 6.5 Operations

The operations of FMs for LSMPAs will be largely dependent on the type of mechanism and institutions selected, and the prevailing contextual factors. However, some general measures can be prescribed to help ensure effective and equitable functioning across almost all scenarios.

### 6.5.1 Outreach, communications, socialisation and training

As discussed above, systematic and robust stakeholder engagement strategies are a critical aspect of sustainable financing for LSMPAs starting at the point of inception. As financing strategies are implemented, and FMs become operational, stakeholder engagement efforts must likewise evolve. New, broader and more general socialisation and outreach may be needed to raise general awareness, while engagements with key stakeholders and participants may become more targeted to the specific roles each stakeholder plays in the operation of FMs.

#### 6.5.1.1 General outreach

While robust stakeholder engagement strategies should be undertaken from the earliest stages of development, these expand further during the operational phase. A broader array of stakeholders should necessarily be made aware of overall financing strategies and the operation of specific FMs. At minimum, these efforts should aim to demystify for a broad audience of local stakeholders the sources, uses, and benefits of financing for LSMPAs in order to prevent the proliferation of biased or incorrect information, which can in turn grow into political resistance.

Messaging around LSMPA financing can be challenging due to the complex nature of FMs and a perceived lack of relevance. These challenges are multiplied when combined with the other potentially provocative aspects of LSMPA management, such as limiting access. It is vital to be transparent and consistent when speaking to the relative costs and multi-year budget projections and to manage the expectations of the public, key stakeholders (including rightsholders) and policy makers from the onset. Efforts should be made to set realistic expectations, particularly regarding the long-time frames required to realize tangible outcomes for conservation efforts over vast marine areas. Management plans are written with 15-20 year horizons so it is important to work to generate the trust and political capital that may allow managers the time and resources required to show success.

A user-friendly presentation format along with simple and clear languaging tailored to the audience are often

critical steps in structuring effective communications, and well-structured translations may be needed in many cases as well. Talking points should provide the public with an understanding of why they should support greater investments in marine management more broadly, as well as the ways in which the site will compliment and amplify the benefits from existing marine initiatives. Very often, messaging around the science and research at an LSMPA are provided separately from its budgetary needs, whereas combining the two provides the necessary context for champions to support the site for the long term.

It is also critical to develop a suite of customised materials that address the top three to five stakeholder groups specific to their needs and interests and , the specific information or data required for each group may be differ or may require alternate presentation. Similarly, it is important to select the right people as public facing presenters. Managers should be prepared to invest in media training by competent experts with experience in provocative conservation issues.

A substantive push in communications in the early stages of design and establishment are essential to ensuring key players are informed and on track to become champions of the LSMPA. However, materials will need to be updated and refreshed over time. As an example, increased public facing communications as well as internally and externally focused education may be required during a change in political administrations. In such cases, new relationships may need to be cultivated with entirely new set of stakeholders, some of whom may know nothing about marine conservation. This may also be the case in the event of a change in staff among a funding partner or finance portfolio management support.

#### 6.5.1.2 Advisory and ownership

In some cases, early stage advisory groups may evolve to become committees leading or supporting specific institutions, such as governance bodies for CTFs. In such cases the makeup of such bodies may need to be refined to serve the specific needs of the institution or simply to adjust with changing circumstances.

In any case, standing oversight and advisory bodies should abide by best practices, including the implementation of standards for membership, decision making and operations, documentation and transparency, legal compliance, and others.<sup>11</sup>

Well-structured advisory boards, with diverse representatives from the public and private sectors, are well-positioned lead outreach to key senior level stakeholders, investigate and develop innovative FMs,

and track emerging trends that may impact the site's financial future. As well, advisory boards can advocate for a site in a way that the managers themselves cannot. In general, such high-level boards can spawn influential champions for LSMPA finance and be a vital resource when facing political headwinds and budgetary cuts.

#### 6.5.1.3 Facilitating access

With more flexible FMs, such as philanthropic funding that is channeled through a CTF granting mechanism, civil society is empowered to utilize funding to further LSMPA objectives. In such cases, additional structured and systematic outreach efforts should be undertaken to make potential users aware of the opportunity and to provide the instruction on how to access such finance. A variety of media should be deployed in such cases, including public announcements at community centers or through local radio, television, and print media or both.

In such cases, where civil society is able to access finance, targeted efforts should be undertaken to directly facilitate such access and provide the skills required to do so. Public events can be utilised in which administrators walk participants through all key aspects of the FM, including objectives, accepted scope of activities, timing, scale, and the information, formats and templates needed to access such finance.

Additionally, managing agencies can create a Financing Task Force or similar group made up of cross sector subject matter experts. This group can both brainstorm as a collective and propose financial strategies and they can also engage with other experts, as well as follow trends. Although a more broadly focused Advisory Body is an important consideration for all LSMPAs, a more focused groups, such as a Financing Task Force, would allow for this specific area to progress at its own pace, unfettered by other management issues.

#### 6.5.1.4 Continuous training

In addition to outreach, communication and socialisation efforts, systematic approaches to continuous professional development and training should be undertaken for all staff and management of LSMPA FMs. Such efforts will vary depending on specific roles and required skills and awareness and will necessarily decrease in intensity from the establishment phase when baseline skills and capacities must be developed.

Also, regular training and professional development activities are required to ensure management and

<sup>11</sup> See, for example, the Conservation Finance Alliance's Practice Standards for Conservation Trust Funds

oversight practices keep pace with staff turnover, evolving best practice standards and changes in prevailing conditions. Moreover, in the first five years, specifically, there can be higher turn over or initial budgets may not have allowed for key positions to be hired. Schedules for regular professional development and training should be developed for high level oversight and governance bodies, management and technical experts, as well as well as core staff and field operatives.

#### 6.5.2 Monitoring and evaluation, audit, and oversight

As with most programs of sufficient size and budget, and particularly those that entail potentially controversial measures such as access limitations, significant scrutiny will be placed on LSMPA FMs. Similarly, poorly designed FMs provide ample opportunity for political capture, appropriation of funds, or worse. Robust and transparent oversight of such FMs is critical to preventing the perversion of these mechanisms and to assuring stakeholder of the mechanism's integrity.

##### 6.5.2.1 Monitoring and evaluation

As with all initiatives, a program of M&E should be implemented to track progress towards stated goals, and should be tailored to both the LSMPA FMs – its scope, goals, and objectives – and to the group of stakeholders with interest in the mechanism. An M&E plan should be developed for the primary institutions involved with, or overseeing, LSMPA financing.

M&E results should be shared with all relevant stakeholders in a systematic and timely manner and should be used to refine mechanism or institutional operations and strategies.

##### 6.5.2.2 Audit

Regular financial audits by qualified third-party auditors is another standard and critical step in ensuring the integrity of FMs and providing assurance to key stakeholders. Audits should be conducted annually at minimum, or more frequently if conditions demand. Audits should be conducted according to international standards and results shared with oversight bodies and subsequently made public for general review.

##### 6.5.2.3 Oversight

General oversight can take a variety of forms. In many cases a senior level oversight board will be tasked with reviewing regular progress reports and making decisions regarding any needed remedial action. Oversight boards should be structured and

operated according to established best practice, abiding by standards pertaining to board membership, operations, and administration among others. A structure for general reporting, including the format and frequency of reporting, should be agreed and clearly articulate and then executed by FM managers. Such regular reporting, in addition to M&E reports and Audit reports, will provide oversight bodies with sufficient information with which to make course corrections if and as needed.

##### 6.5.2.4 Strategy refinement and revision

As with all other areas of management, financial strategies must be periodically updated and revised. There is no specific time interval but it is suggested that an annual and five-year reviews be undertaken. As a stable management regime is critical across the first five years, it is advisable that a site's advisory body or possibly a focused Financing Task Force, be engaged quarterly to assess progress as well as identify any potential challenges or negative impacts

#### Basic components of an M&E plan <sup>12</sup>

**Understanding programmatic objectives**—M&E aims to evaluate progress towards stated goals. An understanding of those goals is critical to developing an appropriate assessment.

**Develop indicators**—Indicators should be identified for key objectives. This should be done for outputs, outcomes and goals. That is, indicators should pertain to the specific activities undertaken, the direct effect of those activities, and the long-term results. An output indicator might refer to funds distributed, for example.

**Define each indicator**—Metrics are the specific measurement that defines an indicator. An indicator referring to funds distributed might be defined as the dollar amount allocated to a specific LSMPA management organisation during a fiscal year.

**Develop data collection, management and reporting procedures**—Metrics should be quantifiable, easily observable and not so numerous as to prohibit effective measurement. A data collection plan should be developed that articulates the data source, method and timing of collection, and identifies those responsible.

as management objectives and real world pressures come face to face in real time. These gatherings may never identify any substantive issues but it is better to be ready and to remain ready to change course then get broadsided by an issue that could have been identified months in advance.

With that said, the political landscape in any country can change rather quickly, and unforeseen challenges can arise (e.g. natural disaster, social upheaval or an oil spill) that require an immediate assessment of an LSMPA's financial outlook as well as short and long term strategies. As such, management team should integrate emergency plans within their staff and advisory bodies to convene as necessary when a situation warrants this level of action.



Nihoa Island, Papahānaumokuākea. © Brad Wong

<sup>12</sup> Additional resources, including templates and detailed guidance on M&E plans, are easily accessible online.

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## Supplementary documents

### Supplementary document 1: LSMPA financing literature review

<<Office of the Pacific Ocean Commissioner (OPOC) website\_Publications>>

### Supplementary document 2: Desktop review of ten LSMPAs, including 3 in-depth case studies

<Office of the Pacific Ocean Commissioner (OPOC) website\_Publications>>

## Annex 1 and 2

### Annex 1: LSMPA finance framework

Area of inquiry	Key questions
<b>Financial planning</b>	<ul style="list-style-type: none"> <li>• Is there sufficient understanding of the financing need?</li> <li>• Were all potential revenue sources assessed?</li> <li>• Are projected costs integrated into overall marine resource management or seen as a stand-alone cost center?</li> <li>• Have efforts been made to mitigate costs and maximize efficiencies and synergies?</li> </ul>
<b>Setup and transaction costs</b>	<ul style="list-style-type: none"> <li>• Are the design costs significant? Are there funding sources for the design phase?</li> <li>• Are there significant start-up costs to get the FM working in the short term?</li> <li>• What are the recurrent costs of operating the SFM? Are there different conservation expense scenarios that affect the FM's cost structure?</li> <li>• Are there first-mover disadvantages, i.e., would first movers shoulder the burden of developing enabling conditions; would economies of scale reduce costs for follow-on actors?</li> </ul>
<b>Governance and participation</b>	<ul style="list-style-type: none"> <li>• Are governance structures sufficient to ensure successful operation and transparency?</li> <li>• Has a representative cross-section of stakeholders, including those impacted, been empowered as decision-makers?</li> <li>• Have the above been addressed during: <ul style="list-style-type: none"> <li>• Planning and design</li> <li>• Set up and establishment</li> <li>• Operation</li> </ul> </li> </ul>
<b>Scale and timing of revenues</b>	<ul style="list-style-type: none"> <li>• Does the projected scale of revenue from the FM address the conservation need?</li> <li>• How soon are revenues realised? Is there a lag time?</li> <li>• Does the timing of cash flows accord with requirements of conservation or project expenditures?</li> <li>• Are there opportunities to modify the FM to capture increased revenue(s)?</li> </ul>
<b>Accessibility</b>	<ul style="list-style-type: none"> <li>• Are there certain design elements that can assure that the revenues generated by FMs are accessible to a broad range of stakeholders?</li> <li>• Are revenues made available to a specific set of stakeholders (e.g. government) or are they available to all identified stakeholders?</li> <li>• Are there established and transparent channels that allow stakeholders to access the FMs?</li> </ul>

Annex .1 continued.

Area of inquiry	Key questions
<b>Durability</b>	<ul style="list-style-type: none"> <li>• Are there certain design elements that can assure that the FM persists over time?</li> <li>• Can the FM take active measures early on to help secure its long-term future?</li> <li>• Can/does the FM increase/maintain stakeholder support by establishing a successful track record?</li> </ul>
<b>Capacity requirements</b>	<ul style="list-style-type: none"> <li>• Are there specific capacity requirements during the design and planning stage? Have these been met?</li> <li>• Are additional or different capacities required for set up and establishment?</li> <li>• Have capacity requirements for ongoing operation been identified and met?</li> </ul>
<b>Contextual fit, relevance and adaptability</b>	<ul style="list-style-type: none"> <li>• Does the mechanism(s) align or fit with local legal, social, and cultural values and structures?</li> <li>• Does the approach impact local social and community safeguards and resilience (outside of the impacts of funded conservation activities)?</li> <li>• Does the approach impact environmental safeguards and resilience (outside of the impacts of funded conservation activities)?</li> <li>• Can the key design elements of the FM be tailored to specific LSMPA contexts?</li> <li>• Are there any specific challenges in the SIDS context or specific to the pacific region?</li> <li>• Can the FM adapt or anticipate short- or long-term changes in priorities or context?</li> </ul>
<b>Risks</b>	<ul style="list-style-type: none"> <li>• What are the key risks associate with the FM?</li> <li>• Have these key risks been identified?</li> <li>• Have mitigation strategies been developed and deployed for such risks?</li> <li>• Is there a risk of diversion of funds, perverse incentives, fraudulent behaviour or benefit capture?</li> </ul>

## Annex 2: Financing mechanism criteria development

The criteria used to assess the FMs in this paper were developed based on a combination of studies:

**Scale:** Potential to generate funds meaningful on a scale relevant to LSMPAs. This criterion is noted as a key one by several authors, including Gobin & Landreau (2017), Iyer et al (2018) and Spergel & Moye (2004).

**Contextual adaptability:** Adaptability to different LSMPA geographies and contexts. Gobin & Landreau (2017) considers whether the FM is applicable to a regional, national, local or site-specific location. Because LSMPAs encompass entire marine ecosystems and ecological processes (Lewis et al., 2017); comprise numerous stakeholders (O’Leary et al., 2018); and have different use values and governance profiles depending on whether they are coastal, highly populated ecosystems or not (Guidetti et al., 2013); LSMPAs vary considerably from each other. Any assessment of FMs must reflect this diversity (IUCN, 2017).

**Ease of implementation:** Potential need for political support, new regulations, technical expertise and training, number of stakeholders involved, funding timeframe. As per above, these criteria are included in the studies by Gobin & Landreau (2017), Iyer et al (2018) and Spergel & Moye (2004). The need for a legal framework is also highlighted in several reports (OECD, 2018; Flores et al., 2008; Bawole et al., 2019; Vivid Economics 2018; Bovarnick, 2007).

**Cost of implementation:** Lewis et al., (2019) note the particular need to include pre-implementation costs in LSMPA planning. Several studies note cost modelling and financial gap analysis as part of financial planning for LSMPAs (CBD, 2019; Binet et al., 2015; CCIF, 2008).

**Flexible use of funds:** Flexibility in use of funds towards LSMPA objectives, risk of diversion, beneficiaries/ recipients of funds. Lewis et al., (2019) note that non-government funding sources are often earmarked to support management activities, and do not address underlying administrative or operation costs; while government budgeting allocations can ignore pre-planning or implementation needs. Spergel & Moye (2004) include the risk of diversion of funds into other purposes than conservation in their criteria, while Gobin & Landreau (2017) include beneficiaries.

**Sustainability:** Longevity of funding and ability to provide financial support of longer time frames, susceptibility to external risks such as political instability. Bos et al., (2015) and Binet et al., (2015) note that the duration of most funding streams for marine conservation initiatives is typically short (1 – 5 years) and insufficient. Geoghegan (1998) conclude that for MPAs to be financially secure they cannot depend on a sole source of income. Spergel & Moye (2004) include social and environmental criteria as well as potential susceptibility to political events as core criteria for assessment of SFM suitability, while Lewis et al., (2017) note the importance of social considerations as well.

**“ With documented learnings from the first 20 years of marine management at-scale centering around the design, establishment, and active in-situ management of LSMPAs, it is time to focus on sustainable financing.”**



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