Conserving our sea of islands

State of protected and conserved areas in Oceania

Editors: Paul van Nimwegen, Fiona Leverington, Stacy Jupiter and Marc Hockings

INTERNATIONAL UNION FOR CONSERVATION OF NATURE – OCEANIA REGIONAL OFFICE

BIOPAMA

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SPREP
Secretariat of the Pacific Regional Environment Programme

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FOREWORD

Protected and conserved areas are vital for safeguarding our unique biodiversity – as well as underpinning culture and livelihoods. The people of the Oceania region have a strong connection to land and sea, and those who have come before and future generations. Indeed, nature and culture are inseparable. Many indigenous peoples see themselves as embodying nature itself. Stewardship is often regarded as an important responsibility in the reciprocal relationship with place. This connection should serve as the foundation for integrating conservation with sustainable use, and implementing effective networks of protected and conserved areas. The countries and territories of the region have made significant progress in empowering indigenous communities and making a disproportionate contribution to marine conservation. However, there is still much investment needed and work to be done.

Conserving our sea of islands: State of protected and conserved areas in Oceania is a landmark publication, bringing together regional and international experts to prepare the first comprehensive review of the status and issues for protected and conserved areas in the region. The report embodies the spirit of the late scholar Epeli Hau'ofa, who devised the phrase 'Our Sea of Islands' to help re-imagine the region as self-determined 'Big Ocean States' connected to place and each other – ideas that underpin conservation.

The report emphasises the underlying rationale for implementing equitable and effective systems of protected and conserved areas, as well as providing a valuable baseline to measure progress against elements of Aichi Target 11 in the Strategic Plan for Biodiversity 2011–2020 (Convention on Biological Diversity). It also explores the important issues of governance, equity, effectiveness, capacity and sustainable financing – highlighting both gaps and opportunities. This will provide guidance to decision-makers, as well as help support well-designed investments and interventions for improving governance and management. As the world approaches the adoption of the new Global Biodiversity Framework, the report will provide a benchmark and serve as a guide to how the new targets can be realised in Oceania.

This significant body of work has been made possible through BIOPAMA, with generous support from the European Union and the Organisation of African, Caribbean and Pacific States. Their long-standing commitment to the protected and conserved areas in the region has made a valuable contribution to the well-being of Oceania people. I would also like to acknowledge the contribution of the project's partners: the Secretariat of the Pacific Regional Environment Programme and European Commission Joint Research Centre.

IUCN Oceania stands ready to work with and support partners and the people of the region to implement equitable and effective protected areas.

Mason Smith
Regional Director
IUCN Oceania

EXECUTIVE SUMMARY

Conserving our sea of islands: State of protected and conserved areas in Oceania report is the first comprehensive regional assessment of protected and conserved areas. The Biodiversity and Protected Areas Management Programme (BIOPAMA) supported the preparation of this report with the following aims:

- Document the status of protected and conserved areas in Oceania;
- Review and outline progress made towards achieving national and international targets for protected and conserved areas, including for coverage, representativeness, connectivity and effectiveness;
- Showcase the achievements and learnings from across the region to promote effective management practices; and
- Review and highlight relevant regional protected and conserved area issues and provide guidance for strengthening their management effectiveness, governance and equity.

This report covers the IUCN region of Oceania, which comprises the following countries and territories: American Samoa, Cook Islands, Federated States of Micronesia (FSM), Fiji, French Polynesia, Guam, Kiribati, Republic of the Marshall Islands (RMI), Nauru, New Caledonia, Niue, Northern Mariana Islands, Palau, Papua New Guinea (PNG), Pitcairn Islands, Samoa, Solomon Islands, Timor-Leste, Tokelau, Tonga, Tuvalu, Vanuatu, and Wallis and Futuna Islands.[1] The region has an astounding array of ecosystems and biocultural diversity. Threats to this include habitat loss and degradation; overexploitation; invasive species; pollution; loss of traditional knowledge, practice and belief systems and human-forced climate change. Along with other conservation strategies, protected and conserved areas play a vital role in addressing these threats and safeguarding the region's biodiversity. They are also important for their contribution to climate change mitigation and adaption, and for supporting local livelihoods and well-being.

The region-wide coverage of protected areas in Oceania, and the representation of biodiversity in the region compared with international statistics is shown on the next page:

[1] For the purposes of this report 'Oceania' is based on the IUCN Oceania region, with the exception of Australia and New Zealand.

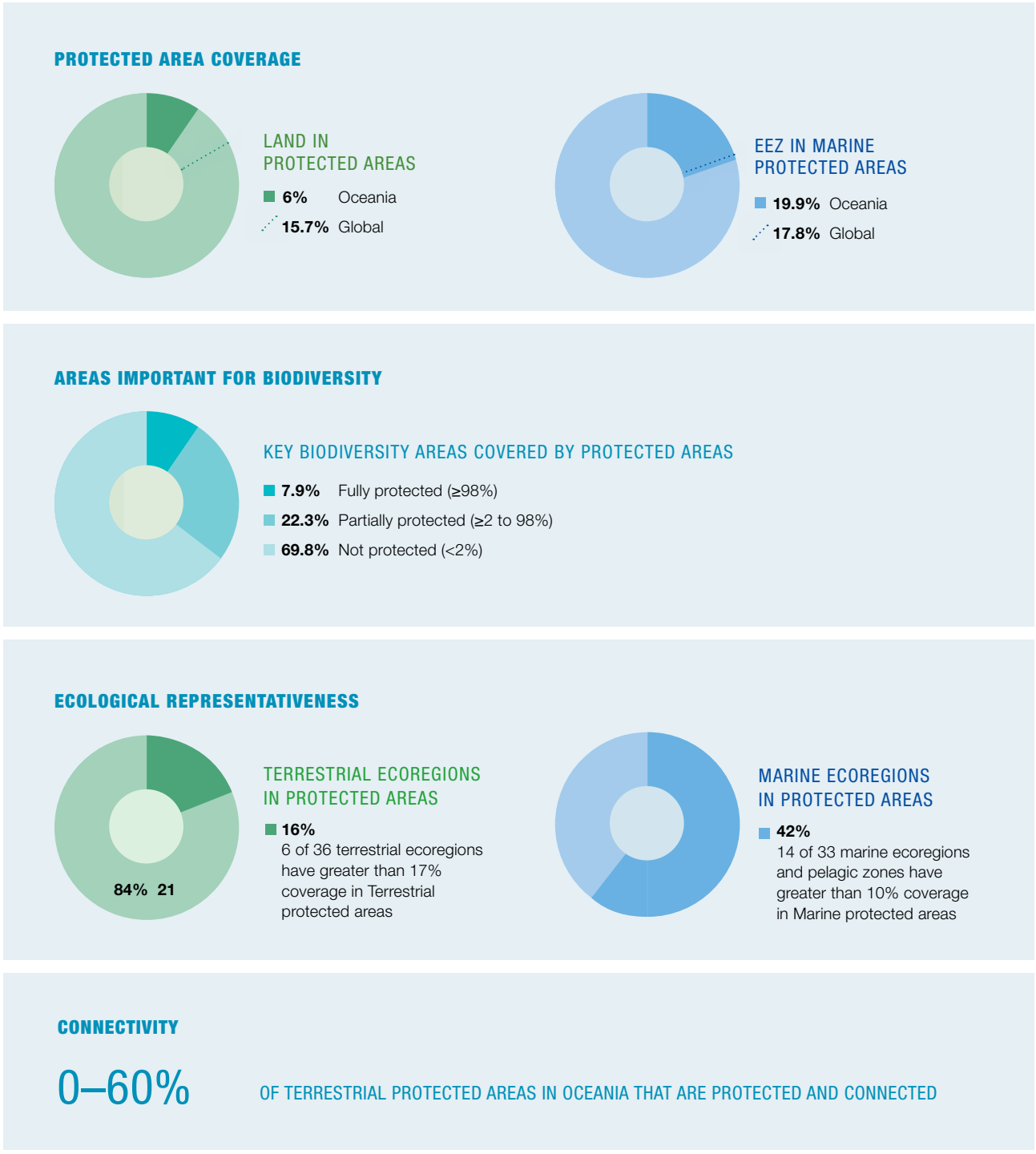

FIGURE i Summary of protected area coverage and connectivity in Oceania.

Sources: ***PA coverage*** *– Modified May 2021 WDPA (UNEP-WCMC & IUCN, 2021a) and World Vector Shoreline (this dataset combines Exclusive Economic Zones (EEZ; VLIZ, 2014) and terrestrial country boundaries (World Vector Shoreline, 3rd edition, National Geospatial-Intelligence Agency);* ***KBA coverage*** *– BirdLife International (2020), UNEP-WCMC & IUCN (2020) based on September 2020 World Database of Key Biodiversity Areas (polygons only) and November 2020 WDPA (polygons only);* ***Eco. Repr.*** *– January 2021 WDPA (UNEP-WCMC & IUCN, 2021c; Olsen et al., 2001; Spalding et al., 2007 and Spalding et al., 2012);* ***Connectivity*** *– January 2021 WDPA; and Global Administrative Unit Layers (GAUL) revision 2015 (2017-02-02).*

More than 13% of countries and territories have achieved their commitments for coverage of terrestrial, marine or both realms. Over the past decade, there has been a modest increase in terrestrial coverage in the region, while marine coverage has increased dramatically, reflecting the efforts of several countries and territories to protect large parts of their EEZs.

Both customary laws and formal legislation provide the basis for establishment, recognition and management of protected and conserved areas in Oceania. All countries in the region, except for the Kingdom of Tonga, were under colonial rule, but most are now independent nations. The exceptions are American Samoa, Guam, Northern Mariana Islands, Pitcairn Islands, Tokelau, French Polynesia, New Caledonia and Wallis and Futuna. Protected and conserved area legislation across the region is diverse. Some countries have general legislation that establishes systems of protected areas, while others have regulatory frameworks relating to protection and management of specific sites. The constitutions of most of the countries make express provision for recognition of custom or customary law in determination of customary land ownership and in many cases there is also specific legislation recognising customary law under statutory law. This plays a critical role in the management, protection and conservation of the region's biodiversity. There are noteworthy gaps in legislation, and many countries have yet to fully establish the legal frameworks needed for effective and equitable protected areas. According to the WDPA, Oceania has the highest proportion of protected areas in the world with community-based governance (37.5% of all sites in the region) and shared governance (9.4%). Independent states have a high level of community-based (47.6%) and a low level of government managed protected areas (13.4%), while the overseas territories only have one community-based protected area and a comparatively high level of government managed sites (77.5%). The actual number of community-based protected and conserved areas may in fact be much higher, as many are not yet recognised by national governments.

Management effectiveness is a measure of how well the protected and conserved areas are being managed and the extent to which their values are being protected. In total, there are records of 226 assessments across 150 protected areas, constituting just under 20% of the protected areas in the region. The most widely applied methodology globally is the Management Effectiveness Tracking Tool or METT, which has been applied in eight countries in Oceania, including in all protected areas in Papua New Guinea (a modified version known as PNG-METT). All of the protected areas have also been assessed in the Palau Protected Areas Network (PAN), using the Micronesia Protected Area Management Effectiveness (MPAME) methodology. There is not enough data to draw conclusions about effectiveness across the region, but a review of three studies (in Papua New Guinea, Palau and across World Heritage sites using the World Heritage Outlook methodology) shows some interesting contrasts in strengths and weaknesses. A key challenge is finding solutions that will increase management effectiveness within the particular community context and governance arrangements. A lack of adequate resourcing to support effective management is evident across much of the region, resulting in major deficiencies in staffing, equipment and training. While local communities are often prepared to support protected areas and, in many cases, to take the lead, they cannot bear all the costs and responsibilities alone.

In Oceania, lack of capacity is likely to be a major impediment for establishing and effectively managing protected areas. Management of protected and conserved areas is usually a shared responsibility, and capacity development is needed across groups including land and sea stewards, management institutions and personnel, and other partners. The IUCN approach to capacity development for protected and conserved areas focuses on people's ability to perform a task or do a job: this is the concept of *competence*. Over thirty competencies in protected area management have been listed in Oceania, over a range of skill and knowledge areas. Competencies can be matched with national qualifications schemes to be the basis of consistent national or regional capacity development programmes, which can be relevant to people ranging from protected area workers and stewards of community-based

conservation initiatives to senior government executives. Recommendations for regional capacity development include the recognition of protected area managers as professionals; development of capacity development plans for protected areas at national levels, and region-wide sharing of approaches; building of essential partnerships to cater for the diversity of skills and knowledge required; the dedication of resources needed for capacity development; and integration of monitoring and evaluation.

Most protected and conserved areas in Oceania have had a long history of interaction between ecosystems and people, meaning that they can be considered as cultural landscapes and seascapes. It is increasingly recognised that management needs to consider provision of ecosystem services alongside nature conservation. In Oceania, policy makers have seen the advantages of decentralised, community-based or co-management approaches to conservation, which in many instances were already in place through customary tenure. Protected and conserved areas are often used by Oceania peoples to reinforce their ancestral connections to place, access and use resources essential to cultural practice, and strengthen the social networks that help shape cultural identity, so cultural factors are often key motivators for conservation action. However, traditions are in decline in many areas, and what was sustainable in the past may no longer be sustainable today as threats to biodiversity and cultural norms increase. Higher populations pose a serious threat to sustainable management, as the need for more food, shelter and firewood puts more pressure on natural resources. Maintaining ecosystem services in the future will therefore require a mixture of traditional methods and new thinking. Active participation of resource owners in conservation and management initiatives can ensure long-term sustainability, well-being and success of biodiversity conservation.

Guidance for sustaining well-being benefits in Oceania include:

- Adoption of a biocultural approach to conservation;
- Linking of stakeholders and rightsholders so that managers, local governance institutions, communities, businesses and other relevant stakeholders and rightsholders work in harmony together;
- Safeguarding of both conservation and rights, while not undermining traditional environmental stewardship;
- Development of culturally appropriate indicators of conservation outcomes; and
- Equitable sharing of rights and benefits.

Significant financing gaps across Oceania undermine efforts to effectively conserve and manage nature: there is often little core funding provided by governments. Some progress has been made on understanding financing needs in the region, with estimations across Micronesia and in PNG of the costs of managing protected area systems. There is also some understanding of the factors that influence management costs, such as reserve size, governance type and remoteness: many parts of Oceania have very high costs relating to transport and the lack of infrastructure. A range of financing options are being explored in the region to support sustainable resourcing. The field of conservation finance is constantly innovating, with new players, products and approaches emerging each year. Options include:

- Green fees such as tourism levies, which have been very successful in Palau;
- Payment for Ecosystem Services schemes, where beneficiaries of ecosystem services (such as the international community or a private entity) pay or compensate providers of those services for the value of benefits received;
- Conservation Agreements: formal or informal understanding between two parties, whereby economic incentives are exchanged for commitments and actions that help to achieve agreed conservation goals; and
- Conservation Trust Funds (CTFs): independent finance instruments used to manage multiple financial resources and asset types, including grants, bonds, debt-swaps or green fees. These may also generate funds through the use of endowments.

The sustainable financing of protected and conserved areas' core functions will need 'traditional' funding sources including government budget allocations, as well as the contributions of different types of donors. Philanthropic funds are commonly used to support conservation; donors contribute funds to global charities, who may fund environmental not-for-profits to establish and manage conservation efforts in partnership with communities. Institutional and private capital is playing a role in the funding of protected areas with investors ranging from small, local investors through to global financial institutions and include 'impact investment'.

To bring all the aspects of financing together, business planning is urgently needed in Oceania at both protected area and system level. Oceania is an innovator in conservation finance, and its unique geography and demographics lend themselves.

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Salt water crocodile (*Crocodylus porosus*) (© Giodana Cipriani via Getty images)

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ACRONYMS

BIOFIN	Biodiversity Finance Initiative
BIOPAMA	Biodiversity and Protected Areas Management Programme
CBD	Convention on Biological Diversity
CMMA	Community-managed marine area
CTF	Conservation Trust Fund
EAGL	Expert Assessment Group for the Green List
EEZ	Exclusive Economic Zone
EVI	Environmental Vulnerability Index
FSM	Federated States of Micronesia
GAPA	Governance Assessment for Protected and Conserved Areas
GD-PAME	Global Database on Protected Area Management Effectiveness
GEF	Global Environment Facility
HDI	Human Development Index
ICCA	Indigenous peoples' and community conserved territories and areas
IUCN	International Union for Conservation of Nature
KBA	Key Biodiversity Area
LMMA	Locally-Managed Marine Area
LSMPA	Large-scale marine protected area
MCA	Marine Conservation Agreement
MEA	Millennium Ecosystem Assessment
MEAs	Multilateral environmental agreements
METT	Management Effectiveness Tracking Tool
MPA	Marine protected area
MPAME	Micronesia Protected Area Management Effectiveness
MSP	Marine spatial planning
NBSAP	National Biodiversity Strategy and Action Plan
NOAA	National Oceanic and Atmospheric Administration
OACPS	Organisation of African, Caribbean and Pacific States
OECMs	Other effective area-based conservation measures
PA-BAT	Protected Area Benefits Assessment Tool
PAME	Protected Area Management Effectiveness
PAN	Protected Areas Network
PES	Payment for Ecosystem Services
PIPA	Phoenix Islands Protected Area
PIRT	Pacific Islands Roundtable for Nature Conservation
PNG	Papua New Guinea
PNG-METT	Papua New Guinea Management Effectiveness Tracking Tool
PoWPA	Programme of Work on Protected Areas
PPA	Privately protected area
RAPPAM	Rapid Assessment and Prioritisation of Protected Area Management
RMI	Republic of the Marshall Islands
SAGE	Site-Level Assessment of Governance and Equity
SAPA	Social Assessment of Protected Areas
SDGs	Sustainable Development Goals
SMART	Spatial Monitoring and Reporting Tool
SPREP	Secretariat of the Pacific Regional Environment Programme
TEV	Total economic value
UNCDB	United Nations Common Database
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNEP-WCMC	UNEP World Conservation Monitoring Centre
USP	University of the South Pacific
WCPA	World Commission on Protected Areas
WCS	Wildlife Conservation Society
WD-OECM	World Database on Other Effective Area-based Conservation Measures
WDPA	World Database on Protected Areas
YUS	Yopno Uruwa Som Conservation Area

CHAPTER 1

INTRODUCTION

Vava'u, Tonga (© Stuart Chape)

AUTHORS

Stacy Jupiter and Hugh Govan

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INTRODUCTION

CHAPTER 1

Introduction

1.1 Overview

Protected and conserved areas are important tools preserving the diversity and abundance of life on Earth. In addition to conserving species and maintaining ecosystems and ecosystem processes, they contribute to maintaining the culture and livelihoods of indigenous peoples and local communities. They also provide critical ecosystem services such as clean air, water and food, which underpin good health and well-being and allow systems to adapt to climate change (Dudley et al., 2010; UNEP-WCMC & IUCN, 2016). These services and values are of particular importance to the people of Oceania, who are highly dependent on biodiversity and natural resources for subsistence, livelihoods and cultural practices (SPREP, 2012; SPREP, 2020).

Conserving our sea of islands: State of protected and conserved areas in Oceania report is the first comprehensive regional assessment of protected and conserved areas in Oceania. The preparation of this report was supported by the Biodiversity and Protected Areas Management Programme (BIOPAMA) (Box 1.1) with the following aims:

- Document the status of protected and conserved areas in Oceania;
- Review and outline progress made towards achieving national and international targets for protected and conserved areas, including for coverage, representativeness, connectivity and effectiveness;
- Showcase the achievements and learnings from across the region to promote effective management practices; and
- Review and highlight relevant regional protected and conserved area issues and provide guidance for strengthening their management effectiveness, governance and equity.

This report covers the following countries and territories (Figure 1.1): American Samoa, Cook Islands, Federated States of Micronesia (FSM), Fiji, French Polynesia, Guam, Kiribati, Republic of the Marshall Islands (RMI), Nauru, New Caledonia, Niue, Northern Mariana Islands, Palau, Papua New Guinea (PNG), Pitcairn Islands, Samoa, Solomon Islands, Timor-Leste, Tokelau, Tonga, Tuvalu, Vanuatu, and the Wallis and Futuna Islands, (excludes Australia and New Zealand). These countries and territories align with the IUCN region, which for the purposes of this report will be referred to collectively as Oceania.

The information presented in the report is designed to provide a comprehensive reference that countries and territories can use to assist on reporting against international frameworks for biodiversity conservation and environmental management (see Section 1.4) and for national reporting. It can also serve as a key reference for identifying regional priorities for establishing new protected and conserved areas, strengthening existing management and governance arrangements, and supporting sustainable financing. As of September 2021, recognised protected and conserved areas in the region cover 6% (34,530 km^2) of the terrestrial environment and 19.9% (5,645,437 km^2) of the marine realm that is within Exclusive Economic Zones (EEZs) (Chapter 2, Figure 2.1).

The report is divided into the following chapters, which provide in-depth information on these topics:

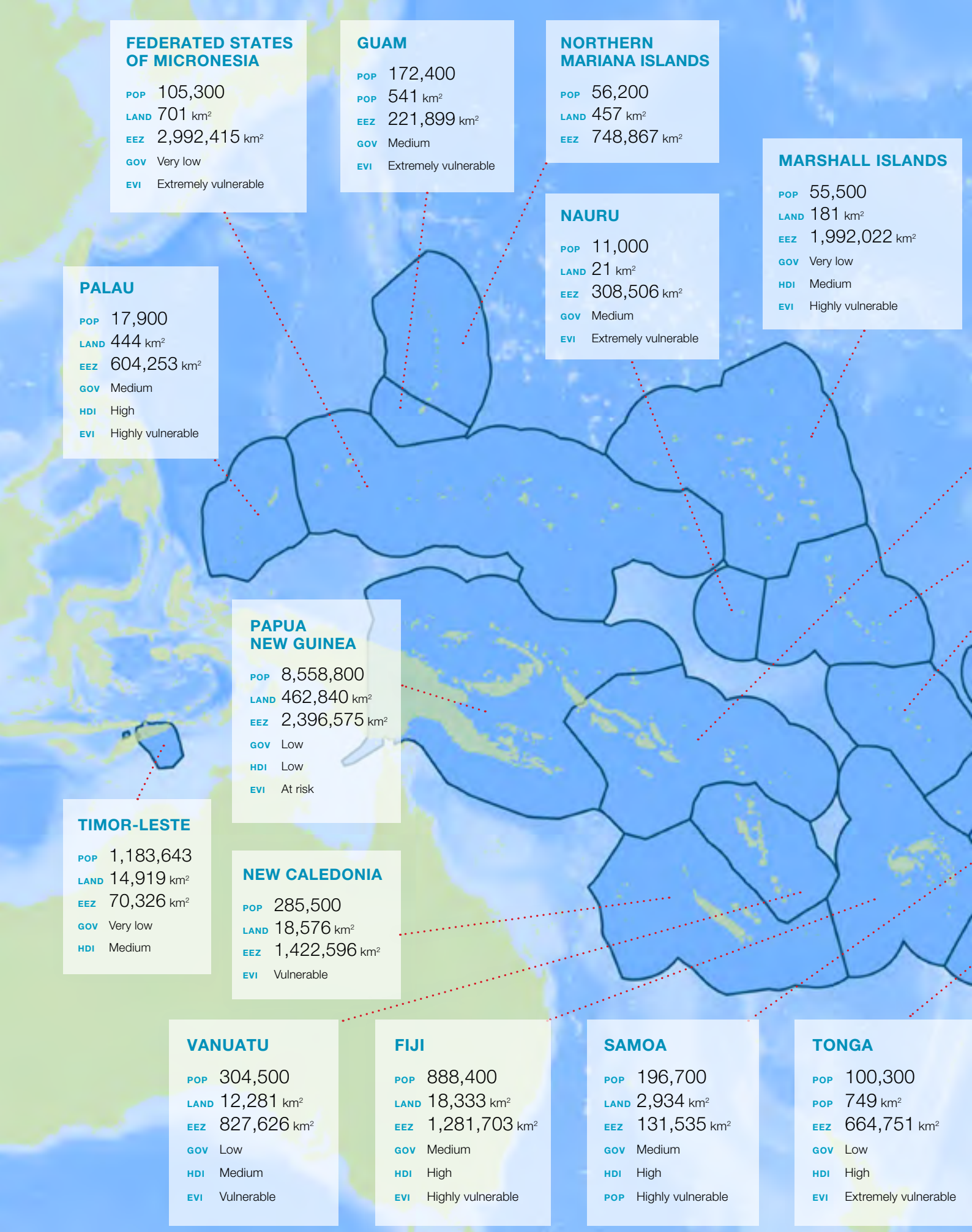
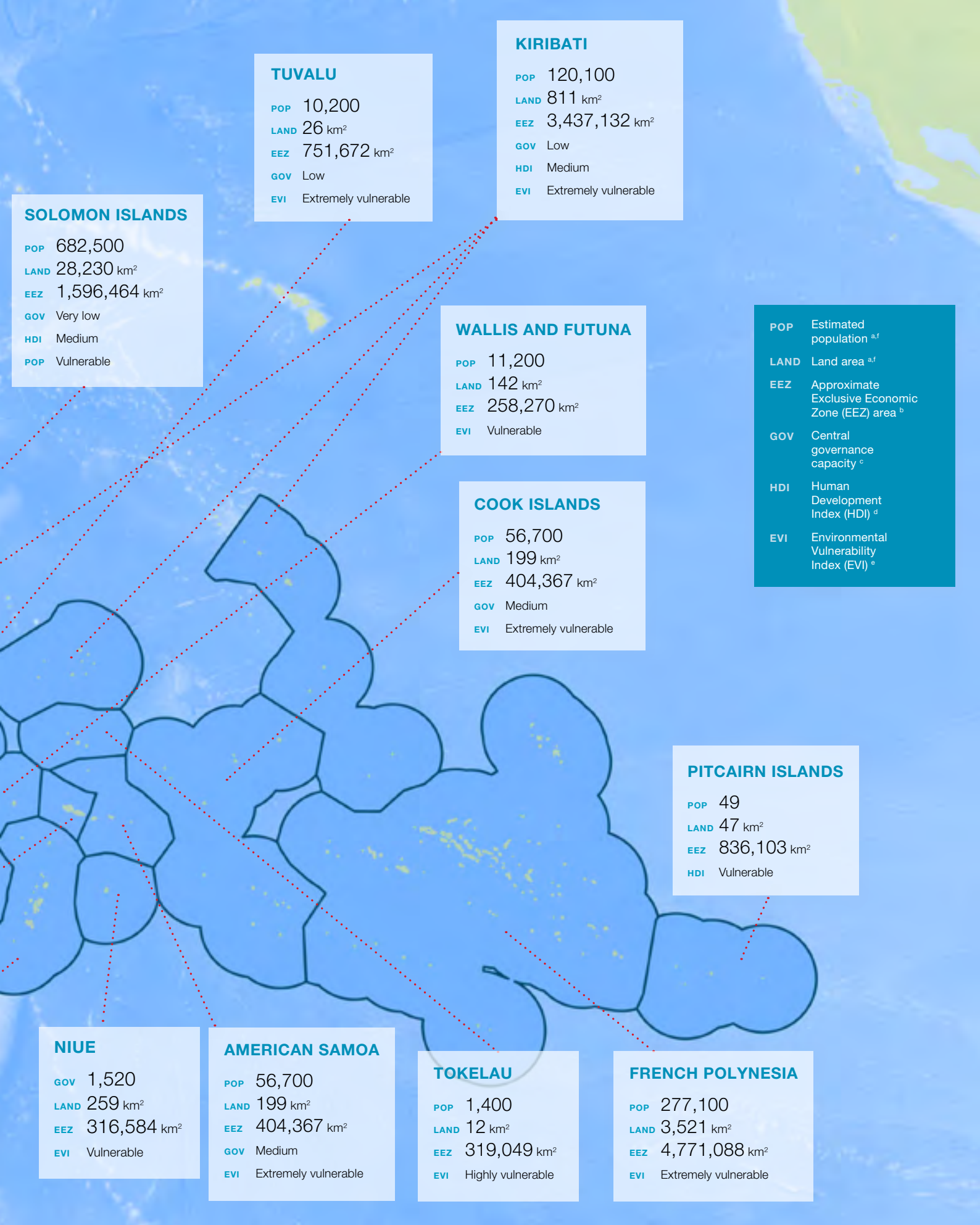


FIGURE 1.1 Countries and territories represented in the Oceania region and their socio-environmental context, including estimated population, land area, approximate Exclusive Economic Zone (EEZ) area, central governance capacity, Human Development Index (HDI) and Environmental Vulnerability Index (EVI).

Source: Updated from Jupiter et al. (2014b).[a]*Source: (SPC, 2018).* [b]*Source: Sea Around Us Project (Pauly & Zeller, 2015). Note: values for EEZs (200 nm) should be regarded as estimates only as some Pacific Island countries and territories have not formalised their EEZs' boundaries.* [c]*Rankings are based on World Bank 2018 Governance*



TUVALU

POP 10,200
LAND 26 km²
EEZ 751,672 km²
GOV Low
EVI Extremely vulnerable

KIRIBATI

POP 120,100
LAND 811 km²
EEZ 3,437,132 km²
GOV Low
HDI Medium
EVI Extremely vulnerable

SOLOMON ISLANDS

POP 682,500
LAND 28,230 km²
EEZ 1,596,464 km²
GOV Very low
HDI Medium
POP Vulnerable

WALLIS AND FUTUNA

POP 11,200
LAND 142 km²
EEZ 258,270 km²
EVI Vulnerable

POP Estimated population [a,f]
LAND Land area [a,f]
EEZ Approximate Exclusive Economic Zone (EEZ) area [b]
GOV Central governance capacity [c]
HDI Human Development Index (HDI) [d]
EVI Environmental Vulnerability Index (EVI) [e]

COOK ISLANDS

POP 56,700
LAND 199 km²
EEZ 404,367 km²
GOV Medium
EVI Extremely vulnerable

PITCAIRN ISLANDS

POP 49
LAND 47 km²
EEZ 836,103 km²
HDI Vulnerable

NIUE

GOV 1,520
LAND 259 km²
EEZ 316,584 km²
EVI Vulnerable

AMERICAN SAMOA

POP 56,700
LAND 199 km²
EEZ 404,367 km²
GOV Medium
EVI Extremely vulnerable

TOKELAU

POP 1,400
LAND 12 km²
EEZ 319,049 km²
EVI Highly vulnerable

FRENCH POLYNESIA

POP 277,100
LAND 3,521 km²
EEZ 4,771,088 km²
EVI Extremely vulnerable

Indicators (accessed from: http://databank.worldbank.org. The 2018 percentile ranking of country government effectiveness and regulatory quality was averaged and grouped into the following categories: 0–25% = very low; 25.1–50% = low; 50.1–75% = medium; 75.1–100% = high. [d] Source: The HDI is a composite index based on relative measures of life expectancy, literacy, education, standards of living and quality of life for countries worldwide (UNDP, 2019). [e]The EVI is a composite index based on 50 indicators that describe three overall aspects of environmental vulnerability (hazards, resistance, damage), measured across the following sectors: climate change, biodiversity, water, agriculture and fisheries, human health aspects, desertification and exposure to natural disasters (accessed from: www.sopac.org/index.php/environmental-vulnerability-index) Pratt et al., 2004. [f]Source: Wikipedia https://en.wikipedia.org/wiki/East_Timor, accessed 7 February 2020

BOX 1.1 BIOPAMA – KNOWLEDGE TO ACTION FOR A PROTECTED PLANET

The Biodiversity and Protected Areas Management Programme (BIOPAMA) is a €60 million initiative of the European Union (EU) and the Organisation of African, Caribbean and Pacific States (OACPS) to improve the long-term conservation and sustainable use of natural resources through the better use and monitoring of information and capacity development on management and governance.

In the Pacific, BIOPAMA is led by IUCN's Oceania Regional Office, in partnership with the European Commission Joint Research Centre (JRC) and the Secretariat of the Pacific Regional Environment Programme (SPREP). BIOPAMA supports the 15 countries of the region (the independent states covered by this report).

The regional focus of the project is to support partners and communities to improve the effectiveness and livelihood benefits of marine and terrestrial protected and conserved areas. This is being achieved through implementing activities under four main areas:

- grants mechanism to support on ground action (expected investment in the region is €3 million);
- training and direct support to government and partners on tools and practices that improve management effectiveness;
- regional protected area support hub, which will support improved decision-making and reporting (hosted by SPREP, see Box 2.4); and
- technical reports that highlight the status of protected and conserved areas in the region.

Participants of the BIOPAMA regional inception workshop held in Apia, Samoa 11–15 June 2018 (© IUCN Oceania)

- Coverage and connectivity (Chapter 2): explores the extent to which countries and territories in the region have developed their nature conservation systems through evaluations of: general coverage of protected and conserved areas; coverage of areas important for biodiversity; and the degree of ecological representativeness and connectivity within the region's protected and conserved area networks.
- Law and governance (Chapter 3): reviews the status of protected and conserved area legislation and the diversity and quality of governance systems in the region, with a focus on the principles of good governance and the tools for conducting assessments.
- Management effectiveness (Chapter 4): describes the importance of management effectiveness for protected and conserved areas and tools for effectiveness assessments; and reviews the degree to which management effectiveness evaluations have been conducted in the region.
- Management capacity (Chapter 5): reviews the capacity needs for protected and conserved areas within the region and describes approaches for building this through highlighting the lessons from regional practitioners.
- Well-being (Chapter 6): explores the human and well-being elements of protected and conserved areas, describing their role in sustainable development and supporting human well-being at the community and societal levels within the region.
- Sustainable financing (Chapter 7): reviews the cost of managing protected and conserved areas in the region and explores strategies for generating the needed revenue through drawing on numerous case studies.

The rest of this chapter shares background and context to the countries and territories in Oceania, and global frameworks for protected area development. This will help readers to focus a lens on protected and conserved area establishment and management through the context of the uniqueness and diversity of the region's biodiversity, sociocultural practices and threats.
In the following sub-section, we review some basic terminology around protected and conserved areas to ensure a common understanding, as they are used throughout this report.

1.2 Terminology

The Strategic Plan for Biodiversity 2011–2020 was adopted by the United Nations Convention on Biological Diversity (CBD) at its 10th meeting of the Conference of the Parties in Nagoya, Japan (CBD, 2010). The Plan includes five strategic goals underpinned by 20 Aichi targets to measure effectiveness. All countries in the region, with the exception of the United States (with territories of American Samoa, Guam and Northern Mariana Islands in the Pacific), are Parties to the CBD and, therefore, are required to report to the CBD progress against agreed targets, including Aichi Target 11, which is specifically focused on protected areas.

Aichi Target 11 specifically calls on Parties to collectively achieve the following:

> By 2020, at least 17 per cent of terrestrial and inland water areas and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures and integrated into the wider landscape and seascape. (CBD, 2010, p.9)

During 2020 and 2021, CBD Parties negotiated a draft text for the Post-2020 Global Biodiversity Framework, which will set out an "ambitious plan to implement broad-based action to bring about a transformation in society's relationship with biodiversity and to ensure that, by 2050, the shared vision of living in harmony with nature is fulfilled" (CBD, 2021, p.3). The Post-2020 Framework sets out four goals and associated targets for: ecosystems, species and genetic diversity; human well-being; equitable benefits sharing; and means for implementation. It is anticipated that Parties will agree to a global Target 3 to be achieved by 2030:

> Ensure that at least 30 per cent globally of land areas and of sea areas, especially areas of particular importance for biodiversity and its contributions to people, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.' (CBD, 2021, p.6)

In order for Parties to be able to effectively report, it is important that there is an understanding of multiple definitions of 'protected area', 'conserved area' and 'other effective area-based conservation measures', commonly referred to as OECMs. Definitions for all three terms are provided below. Special focus on the meanings of 'effectively and equitably managed' will be covered in Chapters 3 and 4 and 'ecologically representative and well-connected' covered in Chapter 2.

In Oceania, it is also important to note that government and non-government stakeholders, working collaboratively at a regional scale and with the guidance of the Secretariat of the Pacific Regional Environment Programme (SPREP), regularly produce an overarching framework for nature conservation and protected areas in the Pacific Islands (Box 1.2; SPREP, 2021). The framework does not explicitly provide any definition for protected and conserved areas, but calls for all governments and supporting agencies, under Objective 3, to "Identify, conserve, sustainably manage and restore ecosystems, habitats, and priority natural and cultural sites" (SPREP, 2021, p.22).

While the framework gives no clear guidance on what constitutes a priority site, it asserts fundamental principles for recognition of community rights, especially over property, and support for conservation from a Pacific perspective that recognises, respects and supports "community aspirations for development and well-being" and "Pacific approaches to conservation based on sustainable resource use, cultural heritage and expressions, and traditional, indigenous, and local knowledge" (SPREP, 2021, p.13). These foundational principles refer in part to the fact that up to 98% of land in some countries is under the customary tenure of the region's over 1,000 ethnic groups (AusAID, 2008; Harmon & Loh, 2004). This emphasises why indigenous and community conservation areas must be part of the region's solution to managing biodiversity (Govan et al., 2009; Govan, 2015a).

BOX 1.2 PACIFIC ISLANDS FRAMEWORK FOR NATURE CONSERVATION AND PROTECTED AREAS

There is a long history of formalised interest in nature conservation in Oceania. In 1975, representatives from Pacific Island nations met in New Zealand to discuss the conservation status of countries and territories in the region at the first South Pacific National Parks and Reserves Conference. Subsequent regional conservation conferences birthed various action strategies for nature conservation in the region.

The prominence of SPREP in coordinating regional conservation actions and promoting the action strategies initially led to a misconception that the action strategies were SPREP institutional strategies, and there was some concern that new conservation actors in the region would not take ownership of them. To address this concern, the Pacific Islands Roundtable for Nature Conservation (PIRT) was formed during the sixth Conference on Nature Conservation and Protected Areas in Pohnpei in 1997. For the first time, a consortium of regional and international organisations formally endorsed the 1998–2002 Action Strategy, committing to promote its implementation and uphold the PIRT partnership.

At the ninth Conference on Nature Conservation and Protected Areas in Fiji in 2013, the Action Strategy was converted into a Framework for Nature Conservation and Protected Areas in the Pacific Islands. The framework was designed to provide guidance on key priorities for biodiversity conservation and ecosystem management, with clear linkages to the CBD global Aichi Targets and National Biodiversity Strategies and Action Plans (NBSAPs). The Framework was reviewed and refreshed in the lead up to the tenth Conference, hosted by New Caledonia and convened virtually, and was presented for endorsement by Pacific Island countries and territories at the 30th SPREP Meeting in September 2021 (SPREP, 2021). The Framework carries a vision of 'Healthy Oceans – Healthy Islands – Healthy People', and includes six strategic objectives with 21 action tracks, as well as eight overarching principles, that were endorsed at the High Level Segment of the conference, where Pacific leaders and PIRT members made commitments to action under the Framework in the Vermööre Declaration.

Former SPREP Director General, Kosi Latu, speaks at the opening of the Nature Conference (© SPREP)

1.2.1 PROTECTED AND CONSERVED AREAS

A commonly accepted definition of a protected area, developed by IUCN, is "a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values" (Dudley, 2008, p.8).

The IUCN provides a set of key principles that should be used to define protected areas, the first of which is that "only those areas where the main objective is conserving nature can be considered protected areas; this can include many areas with other goals as well, at the same level, but in the case of conflict, nature conservation will be the priority" (Dudley, 2008, p.10).

A set of protected area management categories has been developed by IUCN to assist in the reporting and understanding of protected area systems across many different national contexts and legal systems. These categories are presented in Table 1.1 and used throughout the report.

While Oceania countries and territories are encouraged to map their protected areas to the IUCN system, there is not always a perfect correspondence between country designations and the IUCN categories, and not all protected area systems will include all categories (Box 1.3).

Northern Cassowary (*Casuarius unappendiculatus*) (© IUCN/Jeffrey McNeely)

TABLE 1.1 IUCN protected area management categories

Category and name	Description	Primary objective	Regional example(s)
Ia. Strict nature reserve	Areas set aside to protect biodiversity and also possibly geological/ geomorphological features, where human visitation, use and impacts are strictly controlled and limited to ensure protection of the conservation values.	To conserve regionally, nationally or globally outstanding ecosystems, species (occurrences or aggregations) and/or geodiversity features that are extremely sensitive to human impact.	Bird Island Marine Sanctuary, Northern Mariana Islands Montagne des Sources, New Caledonia
Ib. Wilderness area	Areas that are usually large unmodified or slightly modified areas, retaining their natural character and influence, without permanent or significant human habitation, which are protected and managed so as to preserve their natural condition.	To protect the long-term ecological integrity of natural areas that are undisturbed by significant human activity, free of modern infrastructure and where natural forces and processes predominate, for current and future generations.	Rose Atoll National Wildlife Refuge, American Samoa
II. National park	Areas that are large natural or near natural areas set aside to protect large-scale ecological processes, along with the complement of species and ecosystems characteristic of the area, which also provide a foundation for environmentally and culturally compatible spiritual, scientific, educational, recreational and visitor opportunities.	To protect natural biodiversity along with its underlying ecological structure and supporting environmental processes, and to promote education and recreation. [Note that the name National Park as used by countries is not exclusively linked to category II.]	Sigatoka Sand Dunes National Park, Fiji
III. Natural monument or feature	Areas set aside to protect a specific natural monument, which can be a landform, seamount, submarine cavern, geological feature such as a cave or even a living feature such as an ancient grove.	To protect specific outstanding natural features and their associated biodiversity and habitats.	Hakupu Heritage Park Area, Niue President Coolidge and Million Dollar Point Marine Reserve, Vanuatu
IV. Habitat/ species management area	Areas that aim to protect particular species or habitats.	To maintain, conserve and restore species and habitats.	YUS Conservation Area, Papua New Guinea (see Box 3.2) Hatutu Island Reserve Integrale, French Polynesia
V. Protected landscape/ seascape	Area where the interaction of people and nature over time has produced an area of distinct character with significant ecological, biological, cultural and scenic value, and where safeguarding the integrity of this interaction is vital to protecting and sustaining the area and its associated nature conservation and other values.	To protect and sustain important landscapes/seascapes and the associated nature conservation and other values created by interactions with humans through traditional and local management practices.	Ngemelis Island Complex, Palau
VI. Protected areas with sustainable use of natural resources	Areas that conserve ecosystems and habitats, together with associated cultural values and traditional natural resource management system, where low-level non-industrial use of natural resources compatible with nature conservation is seen as one of the main aims of the area.	To protect natural ecosystems and use natural resources sustainably, when conservation and sustainable use can be mutually beneficial.	Vueti Navakavu Locally Managed Marine Area, Fiji (see Case study 6.2) 'O'ua Special Management Area, Tonga

Source: Adapted from Dudley (2008), with regional examples taken from the World Database on Protected Areas (WDPA)

BOX 1.3 DIVERSE DESIGNATIONS OF OCEANIA PROTECTED AND CONSERVED AREAS

The World Database on Protected Areas (WDPA) contains listings of 86 different designation types for protected and conserved areas from across the 23 countries and territories in the region, with little consistency in typologies across jurisdictions. This reflects the regional diversity of different legislative and governance frameworks for protected and conserved areas (see Chapter 3). Representative examples of reported protected and conserved areas to the WDPA from four countries and territories are shown below, with the values in parentheses indicating the number of designated sites per category. Some countries may have legal frameworks that allow for further protected and conserved area categories that have not yet been formally designated. For example, the Solomon Islands Protected Areas Act Regulations 2012 lists five prescribed categories: National Park, Nature Reserve, Natural Monument, Closed Area, Resource Management Area. It should be noted that both the numbers and types of protected and conserved areas listed in the WDPA may be different from those of other published reports, especially where more effort has gone into obtaining permissions and collating information from indigenous and locally managed sites and removing inactive or misrepresented sites (Govan, 2015a; Smallhorn-West & Govan, 2018). Some of these issues are further addressed in Chapter 2 on coverage and connectivity.

AMERICAN SAMOA	NEW CALEDONIA	SOLOMON ISLANDS	TONGA
Marine National Monument (1)	Forest Reserve (7)	Community Conserved Area (2)	Community Conserved Area (14)
Marine Protected Area (10)	Integral Nature Reserve (4)	Conservation Area (1)	Conservation Area (3)
National Marine Sanctuary (1)	Locally Managed Protected Area (10)	Controlled Forest (2)	Marine Reserve (1)
National Park (1)	Marine Protected Area (5)	Marine Conservation Area (4)	Multi/Multiple Use Conservation Area (9)
National Wildlife Refuge (1)	National Park (8)	Marine Managed Area (34)	National Park (3)
	Natural Monument (1)	Marine Protected Area (19)	Nature Reserve (1)
	Natural Park (2)	Marine Protected Area/Tabu (24)	Reserve (11)
	Nature Reserve (30)	National Park (1)	Sanctuary (1)
	Other Area (6)	Reserve (1)	Special Management Area (6)
	Seasonal Integral Nature Reserve (1)	Not Reported (1)	Not Reported (1)
	Seasonal Nature Reserve (2)		
	Special Botanical Reserve (14)		
	Special Fauna Reserve (5)		
	Special Fauna and Flora Reserve (1)		
	Special Marine Reserve (11)		
	Strict Nature Reserve (2)		
	Territorial Park (4)		

Given the remarkable diversity of protected and conserved area designations throughout the region with wide-ranging objectives (e.g. Bird Sanctuary, Controlled Forest, Fishing Reserve, Hunting Reserve, Locally-Managed Marine Area, Marine National Monument, Memorial Park, Recreation Reserve, Wildlife Management Area, etc.), it is clear that countries and territories are not fully adopting the IUCN definition of a protected area in practice, inclusive of the principle for the primacy of the nature conservation objective (Govan & Jupiter, 2013). Rather, many countries and territories seem to be applying an approach to protected and conserved designation that allows for consideration of a range of objectives and "Pacific approaches to conservation" (SPREP, 2021).

1.2.2 OTHER EFFECTIVE AREA-BASED CONSERVATION MEASURES (OECMs)

In November 2018, Parties to the CBD agreed on the following definition of an OECM:

> A geographically defined area other than a Protected Area, which is governed and managed in ways that achieve positive and sustained long-term outcomes for the in-situ conservation of biodiversity, with associated ecosystem functions and services and where applicable, cultural, spiritual, socio-economic, and other locally relevant values. (CBD, 2018, p.1)

An IUCN World Commission on Protected Areas (WCPA) taskforce was set up to develop guidance for recognising and reporting OECMs (IUCN-WCPA Task Force on OECMs, 2019). To be considered as a potential OECM, an area must have positive biodiversity outcomes, regardless of its primary management objectives, and must demonstrate that the management actions employed are effective in achieving durable biodiversity conservation (IUCN-WCPA Task Force on OECMs, 2019). OECMs can be categorised along a gradient of ancillary conservation OECMs, secondary conservation OECMs and primary conservation OECMs (Table 1.2, Figure 1.2).

TABLE 1.2 Different categories of OECMs differentiated by management objective.

Category	Description	Example(s)
Ancillary conservation OECM	Areas that deliver *in-situ* conservation as a by-product of management activities, even though biodiversity conservation is not a management objective	Military reserve
Secondary conservation OECM	An area where biodiversity outcomes are a secondary management objective	Historic wreck reserve, protected for cultural and historical reasons (e.g. President Coolidge and Million Dollar Point protected area in Vanuatu)
Primary conservation OECM	Area that may meet all elements of the IUCN definition of a protected area, but which is not officially designated as such because the governance authority does not want the area to be recognised or reported as a protected area	Areas effectively managed for biodiversity conservation by indigenous peoples and local communities who may have concerns about formal recognition due to sensitivities about public demarcation of boundaries or requirements to waive rights (e.g. Namena Marine Reserve, Fiji) (Clarke & Jupiter, 2010; Govan & Jupiter, 2013)

Source: Adapted from IUCN-WCPA (2019), with examples from the region of potential OECMs

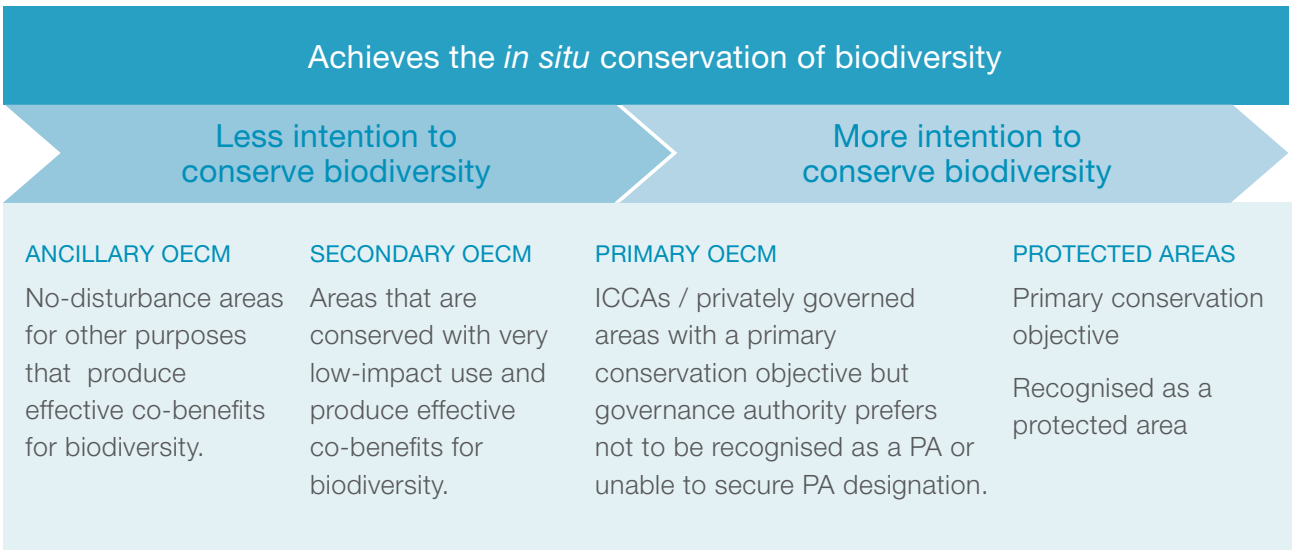


FIGURE 1.2 Schematic showing distinctions based on management objectives between ancillary conservation OECM, secondary conservation OECM, primary conservation OECM and protected areas. ICCA – indigenous peoples' and community conserved territories and areas. PA – protected area. *Source: Harry Jonas*

Globally, there is potential for the OECM concept to promote increased recognition of a diverse range of measures and stakeholders, whose contributions to conservation have previously not been acknowledged (Jonas et al., 2014; Gurney et al., 2021). However, there are legitimate concerns about the applicability of the concept in Oceania. Oceania countries and territories, including Timor-Leste, have yet to formally designate any areas as OECMs. Given that many countries in the region currently recognise, within their protected area accounts, areas that have other primary management objectives besides biodiversity conservation (e.g. Forest Reserves in Fiji that are recognised under legislation to be used for multiple uses, including the felling and extraction of timber; Clarke & Gillespie, 2008), it is possible that the region may see its overall protected area statistics decline if some of these areas are delisted as protected areas but do not meet the criteria for recognition as OECMs. There are also unresolved questions and concerns about: how definitions of effectiveness and equity will be applied in OECM assessment; who will bear the costs of OECM assessment; and risks that the countries and territories will later develop regulations for OECMs that could undermine rights of local governance authorities (Gurney et al., 2021). How countries include these areas (or not) within their protected and conserved area accounts is ultimately at their discretion, and they are in the best position to determine how OECMs can be applied for their own national interests and needs.

In this report, the terminology of 'protected and conserved areas' is used to collectively describe all area-based conservation measures including OECMs. In contrast, the term 'protected areas' refers to formally recognised protected areas designated by national governments or territory administrations (even though they may not fully comply with the IUCN definition or categories).

1.3 'Our Sea of Islands'

The eminent Pacific scholar Epeli Hau'ofa coined the phrase 'Our Sea of Islands', in a reference to the Pacific Islands of Oceania, to help re-imagine the region not as "pitiful microstates condemned forever to depend on migration, remittances, aid and bureaucracy", but rather as "Big Ocean States" with a "sea of islands", emphasising "a more holistic perspective in which things are seen in the totality of their relationships" (Hau'ofa, 1993, p.29). Through this perspective, he encouraged self-determination of Pacific Island states by focusing on the strengths of the connections of Oceania people to place and to each other; concepts which fundamentally underpin Oceania approaches to conservation (Box 6.1; Dacks et al., 2019). In the Pacific Islands' context, these conservation approaches cannot meaningfully be separated from sustainable use (Govan & Jupiter, 2013).

Rich culture of Papua New Guinea highlands
(© Jordan Donaldson/Unsplash)

In customary cultures of Oceania, people do not separate themselves from nature. The ability to undertake cultural practices (such as holding feasts, making customary costumes and engaging in ceremonial exchange) goes hand in hand with maintaining a healthy environment (Ruddle et al., 1992), which gives people the incentive and responsibility to look after the place that they call home (Jenkins et al., 2018). This is evidenced by the vernacular terms from Oceania societies that are all encompassing of linked land and sea units, the natural resources they contain and the people living within those spaces with cultural obligations to look after them. Such terms include *vanua* (Fiji), *fenua* (Tuvalu), *enua* (Cook Islands), *tabinau* (Yap) and *puava* (Marovo, Solomon Islands) (Ruddle et al., 1992; Hviding, 1996; Berkes, 2004).

Cultural beliefs and practices around these spaces have affected resource allocations and access rights for hundreds to thousands of years across Oceania. These norms define tenure boundaries and use rights that regulate access and form the foundation for contemporary conservation measures (Govan et al., 2009), although not necessarily guaranteeing sustainable outcomes (Foale et al., 2011). For example, Oceania peoples may exert stewardship through cultural practice over land and sea customary tenure areas as a way to pay respect to ancestors and future generations by engaging in specific harvesting behaviours or prohibitions that have co-benefits for conservation (Poepoe et al., 2007). Across Oceania, indigenous peoples have customary tenure over a majority of land area in the region, with customary marine tenure variably recognised in the legal frameworks of many Pacific Island states (Chapter 3; Govan et al., 2009; SPREP, 2016).

In many parts of the region, customary management systems are still intact and strong, but in other places the interaction of colonial rule and contemporary competitive resource use has eroded customary practice and institutions, such that local management alone may be

insufficient to achieve biodiversity conservation outcomes without some integration of scientific knowledge and specific legal protections (Polunin, 1984; Cuthbert, 2010; Jupiter et al., 2014a). The Locally-Managed Marine Area (LMMA) Network is an outstanding example where the Oceania region has shared lessons with the world about best practices for community-based marine management, building on the foundations of customary rights and practice (Box 1.4). In parallel, there are striking examples of community-based sustainable forest management from around the region, particularly where new scientific knowledge is being integrated to inform the nature of management rules required to enable wildlife populations to persist under sustainable offtake levels (Whitmore et al., 2016).

Oceania perspectives and worldviews shape how protected and conserved areas need to be designed and implemented for effective and enduring biodiversity outcomes. The potential strengths that the Oceania culture of stewardship has to offer may partially offset the relatively low government resourcing and capacity for conservation in many countries (Govan, 2015a; SPREP, 2020; see Figure 1.1). Ingredients for success need to include: strengthening local connections to people and place; incorporating traditional knowledge, practice, worldviews and beliefs; enabling conservation to enhance sustainable use and livelihoods; developing optimum strategies for government support; and knowing where and when to implement strict legal protections to save critically threatened species and habitats.

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BOX 1.4 LMMAS AND THE LMMA NETWORK

A Locally-Managed Marine Area (LMMA) was defined in 2000 as an "area of nearshore waters and coastal resources that is largely or wholly managed at a local level by the coastal communities, land-owning groups, partner organizations, and/or collaborative government representatives who reside or are based in the immediate area" (Govan et al., 2009). The definition encompassed experiences that have been documented from indigenous and other local communities managing coastal areas, which could coincide with municipal or traditionally owned areas, and within which a variety of management tools may be implemented to achieve specific community objectives relating to the sustainability of resources upon which they depend. These management tools frequently include permanent or temporary no-take reserves in part of the overall managed area (called '*tabu*' by many Pacific indigenous peoples), and other tools, such as seasonal and fishing gear restrictions or restoration activities.

The LMMA Network International formed in 2001 around the common vision of "Vibrant, resilient and empowered communities who inherit and maintain healthy, well-managed and sustainable marine resources and ecosystems." The Network comprises communities, practitioners and government representatives, promoting capacity development across the Pacific and Southeast Asia. Participants in the network are bound only by a common vision and commitment to respect communities as enshrined in a social contract (LMMA, 2018). By 2009, the network was supporting seven national networks in Fiji, Solomon Islands, Palau, Micronesia, Papua New Guinea, Indonesia and Philippines and saw the number of LMMAs increase from a handful in 2000 to some 400 in 2009 (Govan et al., 2009). The establishment and subsequent work of national networks demonstrated that once momentum had been attained, action was far more cost-effectively supported at national or even sub-national level and the Network's role was greatly reduced and refocused. Targeted outreach, training and community or national network member exchanges in the rest of the Pacific Islands, Southeast Asia, Latin America, Western Indian Ocean and East Africa played varying roles in support of a global proliferation of more than 1,000 LMMAs or similar local management practices: over 900 are recorded in the Pacific Island countries and territories alone, with numbers in excess of 100 reported for East Africa and the Western Indian Ocean (Madagascar, Kenya, Tanzania, Myanmar, Mozambique, Comoros) and Southeast Asia (Govan, 2015a; Samoilys et al., 2017; Rocliffe et al., 2014).

1.4 Global context

There are a number of global multilateral environmental agreements (MEAs) for which protected and conserved areas are a core implementation strategy to achieve biodiversity conservation and sustainable development outcomes. These include the CBD, the United Nations 2030 Agenda for Sustainable Development, the World Heritage Convention and the Convention on Wetlands of International Importance. Each of these is described below with reference to specific goals and targets for protected and conserved areas.

1.4.1 CONVENTION ON BIOLOGICAL DIVERSITY

The Convention on Biological Diversity (CBD) was opened for signature at the Earth Summit in Rio de Janeiro in June 1992 and came into force in December 1993, with three main goals for: conservation of biodiversity; the sustainable use of its components; and the fair and equitable sharing of benefits arising from genetic resources (UNEP, 1992). Within the region, ten countries have ratified the CBD, while Kiribati, Niue, Palau, Timor-Leste and Tonga have acceded. The United States is a non-Party, however France and the United Kingdom extend inclusion in MEAs to French Polynesia, New Caledonia, Wallis and Futuna and Pitcairn, though this does not provide inclusion in the CBD to Pitcairn (SPREP, 2016). The CBD adopted a global Programme of Work on Protected Areas (PoWPA) in 2004 (CBD, 2004) in order to support establishment and maintenance of "comprehensive, effectively managed, and ecologically representative national and regional systems of protected areas". The main goals of PoWPA have been to support protected area establishment and management and integration of protected areas in broad land- and seascapes, while promoting appropriate enabling environments, equity and benefits sharing, sustainable financing and involvement of indigenous peoples and local communities and relevant stakeholders. To date, Cook Islands, Fiji, Kiribati, Federated States of Micronesia, France (inclusive of overseas territories), Nauru, Niue, Palau, Samoa, Solomon Islands, Tonga, Tuvalu and Timor-Leste have deposited their PoWPA Action Plans with the CBD.[2]

Following adoption of the CBD Strategic Plan 2011–2020 (CBD, 2010), Parties were encouraged to update their National Biodiversity Strategies and Action Plans (NBSAPs) to align with the five agreed global goals and 20 targets, including Aichi Target 11 on coverage of protected and conserved areas. Global progress against Aichi Target 11 has been steady, with 266,136 protected areas (or 267,148 with OECMs) reported in the WDPA, covering 15.7% (or 16.6% with OECMs) of land and 7.7% (same with OECMs) of sea area on Earth (UNEP-WCMC & IUCN, 2021). However, as noted in Chapter 2, there are clear differences in coverage across the region and variable levels of representation over the most important habitats and geographies for biodiversity.

[2] https://www.cbd.int/protected/implementation/actionplans/

1.4.2 SUSTAINABLE DEVELOPMENT GOALS

The 2030 Agenda for Sustainable Development was adopted by all United Nations member states in September 2015 as a shared roadmap to support the well-being of people and the planet (UN, 2015). It is framed around 17 inter-related Sustainable Development Goals (SDGs), some of which have explicit targets for conservation of biodiversity through area-based management, aligned to the CBD's Aichi Targets, including Targets 14.5, 15.1 and 15.4, which explicitly call for protected area establishment, and Targets 14.2 and 15.1, which call for sustainable management that could be achieved through other effective measures (Figure 1.3).

15 LIFE ON LAND

15.1. By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements.

15.1.1. Forest areas as a proportion of total land area.

15.1.2. Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type.

15.4. By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development.

15.4.1. Coverage by protected areas of important sites for mountain biodiversity.

15.4.2. Mountain Green Cover Index.

14 LIFE BELOW WATER

14.2. By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve health and productive oceans.

14.2.1. Proportion of national Exclusive Economic Zones managed using ecosystem-based approaches.

14.5. By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information.

14.5.1. Coverage of protected areas in relation to marine areas.

FIGURE 1.3 Sustainable Development Goals, targets and indicators with particular relevance for protected and conserved areas. *Source: Adapted from UN (2017)*[3]

[3] Indicator text is extracted from the global indicator framework as contained in A/RES/71/313, the refinements agreed by the Statistical Commission at its 49th session in March 2018 (E/CN.3/2018/2, Annex II) and 50th session in March 2019 (E/CN.3/2019/2, Annex II), changes from the 2020 Comprehensive Review (E/CN.3/2020/2, Annex II) and refinements (E/CN.3/2020/2, Annex III) from the 51st session in March 2020, and refinements from the 52nd session in March 2021 (E/CN.3/2021/2, Annex).

The consideration of other SDGs through protected and conserved area design and implementation is of great importance for achieving management effectiveness (Chapter 4) and well-being (Chapter 6). Gender inclusion and empowerment of women and girls (SDG 5) and accountable and inclusive institutions that provide equitable justice (SDG 16) are key factors that are likely to be associated with protected and conserved area management success. Moreover, designing protected and conserved areas that also optimise outcomes for human well-being can advance progress against SDGs 1 (no poverty), 2 (zero hunger), 3 (good health and well-being), 6 (clean water and sanitation) and 13 (climate action), as well as incentivise participation in management and public buy-in (Chapter 6).

There have been recent suggestions that global frameworks such as the SDGs do not adequately capture all dimensions of well-being that are critical for achieving conservation and sustainability outcomes in Oceania (Sterling et al., 2020). Two critical dimensions in particular are overlooked: connections to people and place; and indigenous and local knowledge, practice, beliefs and worldviews (Dacks et al., 2019). These well-being dimensions are particularly important when designing protected and conserved areas to help keep Pacific peoples connected to their place and foster good environmental stewardship (Box 6.1; Dacks et al., 2019), but they may be overlooked if programmes and development agendas only take cues from the existing SDG targets and indicators, which were created using very Western worldviews (Sterling et al., 2017a).

Some countries, such as Vanuatu, have tailored indicators for their national development plans that better reflect national definitions of well-being, which are being used both to help inform resource allocation and to evaluate performance of protected and conserved areas. For example, two indicators in the monitoring and evaluation framework for the Vanuatu People's Plan 2030 (DSPPAC, 2017), "proportion of population with knowledge of traditional stories, dances, songs, and games" and "proportion of population with knowledge of names of local flora and fauna" can be used to track awareness and respect for customary rules, knowledge and practice, a critical component of compliance in indigenous peoples' and community conserved territories and areas (ICCAs). Countries have the opportunity to develop their own indicators for their Voluntary National Review reports, and guidance has been developed for decision-makers on how to develop culturally attuned indicators (Assessing Biocultural Indicators Working Group, 2019).

Nan Madol, Ceremonial Centre of Eastern Micronesia World Heritage site, Federated States of Micronesia (© UNESCO/S.Haraguchi)

1.4.3 WORLD HERITAGE CONVENTION

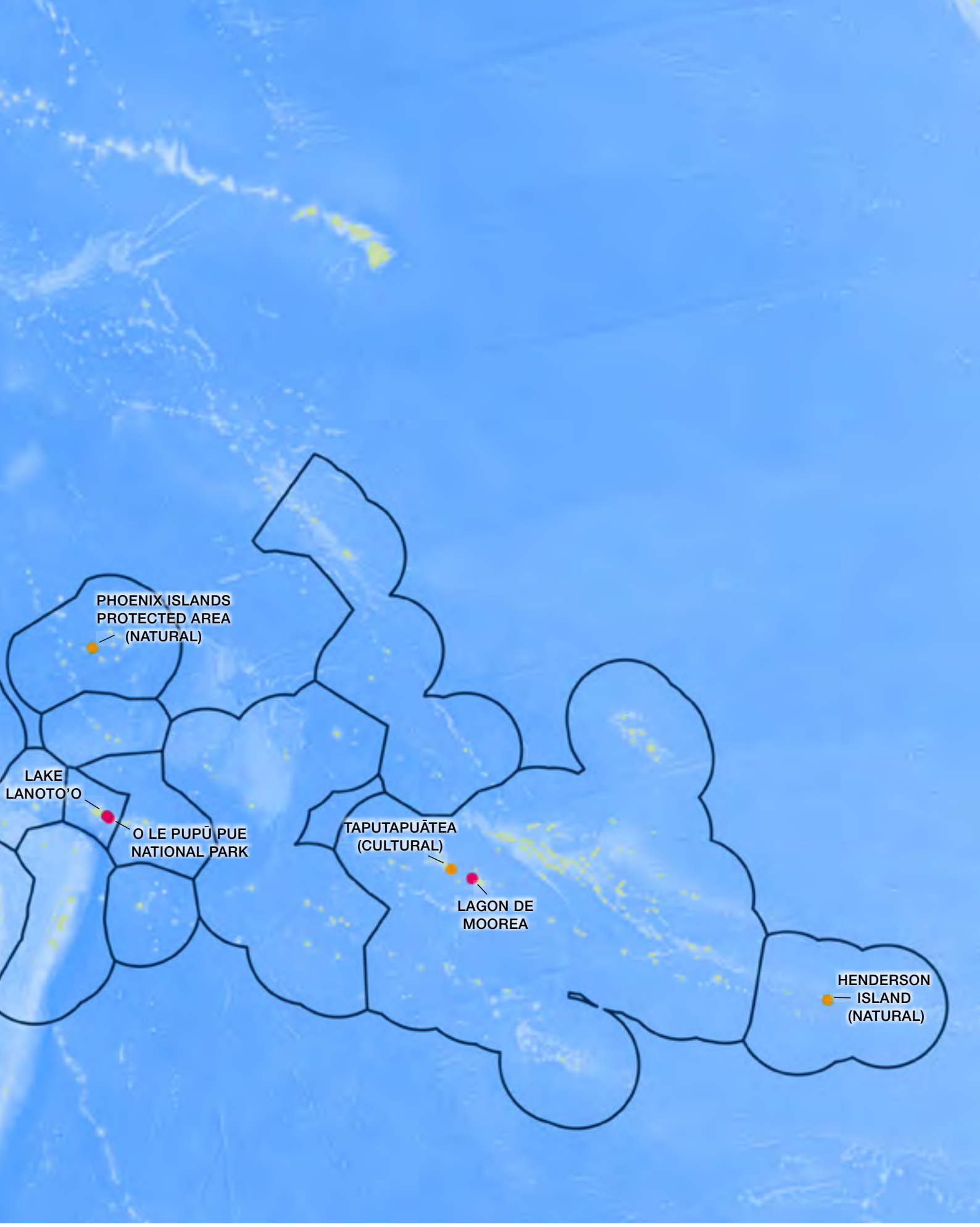
The Convention concerning the Protection of the World Cultural and Natural Heritage was adopted by the General Conference of the United Nations Educational, Scientific and Cultural Organization (UNESCO) in November 1972, with the dual aims of preserving cultural and natural sites and preserving the links between culture and nature.

In the Oceania region, Cook Islands, Fiji, Vanuatu and Timor-Leste have ratified the Convention; Solomon Islands acceded to it; and FSM, Kiribati, RMI, Niue, Palau, Papua New Guinea, Samoa and Tonga have accepted it; while the Convention has been extended to Pitcairn by the United Kingdom (SPREP, 2016).

Despite broad national support for the Convention, only four natural World Heritage sites, six cultural sites (including three cultural landscapes), and one mixed natural and cultural site have been declared in the region, with East Rennell and Nan Madol on the List of World Heritage sites in danger (Figure 1.4). This may be due to the great time and cost required for site designation and consequent government enforcement versus expected conservation, economic and well-being returns.

In countries with customary tenure and access rights, considerable effort must be invested into managing expectations associated with designation of a World Heritage site or else risk community dissatisfaction and ineffective outcomes (Smith, 2011). Recognising the region's past achievements and common challenges, the most recent Pacific World Heritage Action Plan (2016–2021) provides an important framework to advance the implementation of the Convention in the region, including the goal to enhance the capacity of Pacific nations to successfully nominate and effectively manage their World Heritage sites. The Action Plan is supported by a broad multi-stakeholder partnership on "Heritage strengthening in the Pacific" under the UNESCO Pacific Strategy 2018–2022. The BIOPAMA project is currently preparing a publication on the status and opportunities for natural World Heritage in the region, which will be launched in late 2022.

FIGURE 1.4 Designated World Heritage and Ramsar sites in Oceania.
Source: Compiled by UNEP-WCMC using data from UNEP-WCMC and IUCN (2021) and UNESCO (2021)


PHOENIX ISLANDS
PROTECTED AREA
(NATURAL)
LAKE
LANOTO'O
O LE PUPŪ PUE
NATIONAL PARK
TAPUTAPUĀTEA
(CULTURAL)
LAGON DE
MOOREA
HENDERSON
ISLAND
(NATURAL)

1.4.4 CONVENTION ON WETLANDS OF INTERNATIONAL IMPORTANCE (RAMSAR CONVENTION)

The Convention on Wetlands of International Importance especially as Waterfowl Habitat was adopted in Ramsar, Iran, in February 1971 and came into force in 1975. Its main purpose is to promote the conservation and sustainable use of wetlands through local, national and regional actions and international cooperation. Fiji, Kiribati, RMI, Palau, Papua New Guinea and Samoa have signed or acceded to the Convention and have established Ramsar sites, while the Convention has been extended to Tokelau by New Zealand, to Pitcairn by the United Kingdom, and to French overseas territories by France (Figure 1.4; SPREP, 2016). Designation as a Ramsar site potentially may attract resourcing to wetland sites of national and global significance to assist with management, however as with World Heritage listing, the costs of designation need to be balanced against expected benefits.

Lake Lanoto'o Ramsar site, Samoa (© Stuart Chape)

1.5 Significance of biodiversity in the region

The biodiversity of Oceania includes an astounding array of ecosystems, including tropical montane cloud and rainforests, open woodlands and grass savannahs, freshwater lakes and streams, salt marshes and mudflats, mangrove and coastal littoral forests, seagrass, fringing and offshore coral reefs, and deep sea trenches and abyssal plains (SPREP, 2012). The region is notable both for its hotspots (high diversity, high endemism) and cool spots (low diversity, high endemism) (Thaman, 2014). The island of New Guinea, including Papua New Guinea, is considered one of the world's five greatest high biodiversity wilderness areas (Mittermeier et al., 2003), and with Solomon Islands and Timor-Leste, is part of the Coral Triangle, the world's epicentre for marine biodiversity (Veron et al., 2009). Marine species richness declines towards the eastern edge of the region, with higher rates of endemism in some taxa (Hughes et al., 2002).

High island endemism of terrestrial and freshwater species is driven by small land area compared with sea area and large distances between land masses across the Pacific (Woinarski, 2010). Papua New Guinea and Solomon Islands are in the top ten countries in the world with the most range-restricted species of birds (Steadman, 1997) and Solomon Islands has the highest level of avian endemism per land area on the planet (Diamond & Mayr, 1976). The region also has phenomenal agrobiodiversity that supports the livelihoods, culture and well-being of Pacific peoples (Thaman, 2014). As an example, Solomon Islands boasts 63 species of figs (*Ficus* spp.) with edible leaves and fruit, of which 36.5% are endemic (Corner, 1967).

While island isolation has promoted high regional endemism, low species diversity by area, small population sizes, genetic bottlenecks and lack of redundancy in functional groups make Pacific Island biodiversity very sensitive to disturbance (Jupiter et al., 2014b). As a consequence, The 2020 IUCN Red List of Threatened Species™ includes 1,764 species from Oceania that are threatened with extinction (Critically Endangered, Endangered and Vulnerable categories), with documentation of 127 extinctions and 12 extinctions in the wild (Box 1.5; SPREP, 2016). Key Biodiversity Areas (KBAs), sites of global significance for the conservation of biodiversity (IUCN, 2016), have been described for much of the region to prioritise investment in area-based management through protected and conserved areas. Chapter 2 provides an assessment of KBA coverage within regional protected and conserved areas.

The total variety exhibited by the world's natural and cultural systems, known as biocultural diversity, is also extremely high for Oceania, particularly the Melanesian countries which consistently rate amongst the 15 most culturally and linguistically diverse countries at a global level. With less than 10 million inhabitants, Oceania comprises over one thousand different ethnic groups and languages, nearly a quarter of the world total (Govan et al., 2009; Harmon & Loh, 2004).

Village elder describing traditional plant use, Yap, Federated States of Micronesia (© Stuart Chape)

BOX 1.5 THE IUCN RED LIST OF THREATENED SPECIES™

Established in 1964, The IUCN Red List of Threatened Species™ is the world's most comprehensive inventory of the global conservation status of plants and animals. It uses a set of quantitative criteria to evaluate extinction risk, dividing species into nine categories: Not Evaluated, Data Deficient (DD), Least Concern (LC), Near Threatened (NT), Vulnerable (VU), Endangered (EN), Critically Endangered (CR), Extinct in the Wild (EW) and Extinct (EX). These criteria are relevant to most species and all regions on the planet. Species categorised as CR, EN or VU are considered to be threatened. As of January 2022, there are more than 142,577 species that have been assessed, with more than 40,000 threatened with extinction, including 41% of amphibians, 37% of sharks and rays, 33% of reef building corals, 26% of mammals and 13% of birds. With its strong scientific base, the Red List is recognised as the most authoritative guide on the status of biological diversity. For further information, visit: www.iucnredlist.org

Dugong (*Dugong dugon*), Palau (IUCN Photo Library / © Mandy Etpison)

1.6 Threats and challenges to biodiversity in the region

Ecosystems and species across Oceania are threatened by:

- habitat loss and degradation;
- overexploitation;
- invasive species;
- pollution;
- loss of traditional knowledge, practice and belief systems; and
- human-forced climate change (Kingsford et al., 2009; Jupiter et al., 2014b).

Habitat loss and unsustainable use significantly affect terrestrial and marine species and habitats throughout the region, driving biodiversity declines and impacting ecosystem service provisioning for people. This is largely driven by:

- increased consumer demand from population growth and shifts both within and beyond the region;
- development, including for infrastructure;
- agricultural expansion;
- poor governance;
- poverty and lack of livelihood alternatives; and
- insufficient incentives for conservation (Woinarski, 2010; SPREP, 2016).

Native forests are overharvested for timber and fuel, and are often converted to production forests or monoculture agriculture (Keppel et al., 2014). Global Forest Watch data indicate substantial regional loss of forest cover between 2001 and 2018 in countries with the largest land area, amounting to loss of 14,000 km^2 (3.3%) in Papua New Guinea, 1,620 km^2 (5.9%) in Solomon Islands, 223 km^2 (1.5%) in New Caledonia, 405 km^2 (2.6%) in Fiji, 258 km^2 (3.5%) in Timor-Leste and 122 km^2 (1.0%) in Vanuatu (Global Forest Watch, n.d.). Coastal fisheries data suggest many stocks are fully or over-exploited, given that production across the Pacific region did not increase between 1999 and 2014, despite increasing fishing effort (Gillett, 2016). Eleven Pacific Island countries and territories (Papua New Guinea, Fiji, Solomon Islands, Vanuatu, Samoa, Wallis and Futuna, Guam, American Samoa, Northern Mariana Islands, Niue and Nauru) are not expected to meet forecast needs from coastal fisheries by 2030 (Bell et al., 2009).

Habitat loss is also driven by rapid rates of development, which is poorly regulated throughout the region dominated by weak and underfunded central governance regulatory environments (Figure 1.1; Laurence et al., 2011; Govan, 2015a; Govan, 2015b). Although a majority of the countries and territories in the region (Nauru, New Caledonia and Tokelau are exceptions) have legislation requiring some form of environmental impact assessments (SPREP, 2016), the EIAs performed may be insufficient or poorly monitored, with devastating consequences for biodiversity from large infrastructure and development projects (Alamgir et al., 2017). While many countries require local landowner consent for development to occur, erosion of traditional governance structures and loss of connection to place has led to many cases of land misappropriation or alienation without proper agreement, with subsequent biodiversity losses and negative impacts to human well-being (McDonnell et al., 2017).

Invasive alien species are another major driver of biodiversity loss globally (SPREP, 2016), with islands particularly vulnerable to invasive species introductions (Simberloff, 1995). On land, invasive plants alter ecosystem processes and functions, paving the way for further invasions (Meyer, 2014). Predatory mammals (e.g. cats, rats, mongooses and feral dogs) impact 75% of threatened bird species in the region. Introduced ungulates (e.g. cattle, sheep, goats, pigs, deer) trample and degrade habitats, while non-native invertebrates (e.g. African snail, fire ants), fish (e.g. tilapia, mosquitofish) and birds (common myna, red-vented bulbul) prey on or outcompete native species (SPREP, 2016). The countries and territories with the most documented alien invasive species in the region are Federated States of Micronesia, Fiji, Guam, Niue and Palau (SPREP, 2016). While numerous invasive mammal eradication campaigns have been carried out on Pacific Islands, costs are high and projects do not always succeed (Jupiter et al., 2014b). Investment in biosecurity training is critical (Champion, 2018), as well as establishing protected and conserved areas over intact ecosystems that are likely to be more resilient to invaders (Watson et al., 2018).

Climate change impacts present new challenges to biodiversity and also exacerbate existing threats. Sea level has been rising across the western Pacific at rates exceeding 6 mm per year (ABOM & CSIRO, 2011), and nearly double that around parts of Solomon Islands where whole island habitats have already vanished (Albert et al., 2016). While there is high inter-annual variability, on average, sea surface temperatures have warmed by 0.75 °C in this region over the past 50 years, with extended El Niño events associated with droughts that may cause greater rates of fires in logged forests (Siegert et al., 2001), and marine heat waves leading to mass coral mortality (McClanahan et al., 2019). Model projections indicate a widespread increase in the number of heavy rain days, with extreme 1 in 20-year events likely to occur four times per year by 2055 under high emissions scenarios (ABOM & CSIRO, 2011). Resulting flooding and land-based runoff, particularly in areas downstream of degraded catchments, can negatively impact freshwater and marine biodiversity (Jenkins & Jupiter, 2011; Brown et al., 2017), as well as compromise water safety and health of people (Wenger et al., 2018).

Critically Endangered Fijian Crested Iguana (*Brachylophus vitiensis*)
(© NatureFiji-MareqetiViti (NFMV)/Baravi Thaman)

1.7 The role of protected and conserved areas in the region

Protected and conserved areas that explicitly restrict habitat destruction, regulate harvesting and pollution, and manage for invasive species are essential tools for maintaining the integrity of the region's last intact ecosystems in order to conserve biodiversity and maintain human well-being. The Oceania region has some notable examples where effective management within formally protected and informally conserved areas has enabled maintenance and recovery of threatened species. For example, designation of the Phoenix Islands Protected Area (PIPA) resulted in the eventual displacement of fishing effort to outside its boundaries (Merten et al., 2016), and has been coupled with island invasive eradication campaigns that enabled seabird population recovery following removal of rabbits on Rawaki Island and rats on McKean and Birnie Islands (MELAD, 2015). These gains may be undermined by a proposal by the Kiribati Government to open the site to future commercial exploitation. Various case studies of community-managed conserved areas are also highlighted in this volume to showcase the positive outcomes of these common locally-driven approaches for biodiversity, as well as co-benefits for human well-being (see, in particular, Box 3.2, Case study 6.2, Case study 6.3).

While there may be a few regional exceptions (e.g. Palau National Marine Sanctuary), individual protected and conserved areas in Oceania are rarely large enough to address the scale of threats and their impacts, particularly where national institutions are inadequately resourced (Govan, 2015a; SPREP, 2020). Comprehensive threat mitigation therefore requires consideration of the design of networks of managed areas building on cultural and local institutional assets in configurations that will optimise both conservation and well-being outcomes. These networks should ideally be embedded within landscape, seascape or integrated island management systems that coordinate horizontally across sectors and ensure vertical alignment between national policies and local actions (Jupiter et al., 2014c). Over the past decade, there has been surging interest from many Oceania states in marine spatial planning (MSP), with countries like Tonga, Vanuatu and Solomon Islands rapidly advancing whole of EEZ planning processes (see Box 2.3).

However, successful land- and seascape management cannot rely on area-based planning alone: it also depends on development and, particularly, enforcement of strong regulations to restrict harvest and trade of vulnerable species and those associated with environmental impact assessment processes. For example, implementation of measures to limit land-based pollution are critical to achieve downstream marine conservation outcomes: without these in place, downstream conservation efforts may fail (e.g. Hamilton et al., 2019).

Area-based management has also failed to deliver biodiversity conservation outcomes in Oceania when: the establishment process is perceived to be too top down; protected and conserved area objectives are not well matched to local needs and priorities; and benefits are perceived to be distributed inequitably (Huber & McGregor, 2002; Jupiter, 2017). To avoid these outcomes, various tools have been developed that are featured in this volume and can be tailored to local contexts in Oceania to support more effective engagement and management implementation, including through: promoting good governance (Table 3.3); developing local capacity (Box 5.1); and adapting efforts based on regular monitoring (Chapter 4). In the Oceania region, where a large proportion of people are highly dependent on natural ecosystems and resources, management will be more likely to succeed when local people are engaged from the outset through approaches explicitly designed to maintain and/or revitalise connections between nature and culture (Sterling et al., 2017b), including by revitalising traditional knowledge and language systems.

1.8 Conclusion

The Oceania region stands out globally for its vast ocean areas and highly unique, but highly threatened, island biodiversity, as well as living customary management systems that can provide the foundation for management through protected and conserved areas. Pacific perspectives and worldviews are critical to shaping design and implementation of protected and conserved areas for effective and enduring outcomes for nature and people in the region, if not the world. This volume showcases the progress that Oceania states and territories have made in biodiversity conservation using protected and conserved areas by:

- Reporting on achievements under global targets for coverage, representativeness and connectivity (Chapter 2);
- Developing legal and policy frameworks in support of protected and conserved area establishment and implementation (Chapter 3);
- Highlighting the diversity of governance arrangements for protected and conserved areas (Chapter 3);
- Providing examples of regionally tailored management effectiveness assessments (Chapter 4);
- Building capacity for effective management and governance of protected and conserved areas (Chapter 5); and
- Identifying opportunities for achievement of co-benefits for human well-being (Chapter 6); and
- Trialling and implementing innovative sustainable financing mechanisms through protected and conserved areas (Chapter 7).

Throughout the volume, case studies and best practice examples are highlighted in order to provide context to help share successful lessons.

Each chapter also indicates where to focus critical efforts in the coming decades in the region to ensure that protected and conserved areas will fulfil their promise of meaningfully conserving biodiversity for future generations.

Women Fishing in Bua, Fiji (© Stacy Jupiter/WCS)

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Women of Ha'ateiho discussing the importance of marine spatial planning, Tonga (© MEIDECC Tonga)

COVERAGE AND CONNECTIVITY

Wallis Island (© Stacy Jupiter/WCS)

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COVERAGE AND CONNECTIVITY

CHAPTER 2

Coverage and connectivity

2.1 Introduction

The countries and territories of Oceania have increasingly recognised the need to dedicate areas for protection and management, and have organised and coordinated themselves to fulfil this goal. Notably, the Micronesia Challenge is a commitment by three states (the Federated States of Micronesia, Republic of the Marshall Islands and Palau), together with the territories of Guam and Northern Mariana Islands, to preserve the natural resources that are crucial to the survival of Oceania's traditions, cultures and livelihoods. The goal of the Challenge is to "effectively conserve at least 30% of the near-shore marine resources and 20% of the terrestrial resources across Micronesia by 2020" (Micronesia Challenge, 2020). The Micronesia Challenge has been widely commended and set an unprecedented example of collaborative, sustainable marine and terrestrial conservation for the international community. Furthermore, the Cook Islands, New Caledonia, Pitcairn Islands and Palau have placed all or most of their Exclusive Economic Zones (EEZ) under some level of protection (UNEP-WCMC & IUCN, 2021a).

The region's ambitions are not limited to the marine realm. For example, as the largest land mass in the region, Papua New Guinea has made commitments to conserve its biodiversity for the benefit of nature and people. In addition to coverage targets, these commitments take into account representativeness (with a goal of capturing 80% of all identified vegetation types and landforms in protected areas by 2025), and coverage of threatened species' ranges (with a goal of protecting 30% of the range of all rare, threatened and restricted-range species by 2025). These commitments have been made while recognising the historic and ongoing leadership of local communities in managing the country's biodiversity, and with consideration of the need to respect customary land ownership (Independent State of Papua New Guinea, 2014). They are underpinned by international agreements such as the Convention on Biological Diversity and the Sustainable Development Goals, as described earlier in this report.

According to the World Database on Protected Areas (WDPA) and World Database on Other Effective Area-based Conservation Measures (WD-OECM) (Box 2.1), global terrestrial and freshwater coverage stood at 16.6% and marine coverage at 7.7% in May 2021 (UNEP-WCMC & IUCN, 2021a). Protected areas have expanded since the inception of Aichi Target 11, with many areas of vital importance to biodiversity now managed for conservation. Gaps remain, however, and at the global level there are disparities in the level of protection of different ecoregions, and of areas of importance for biodiversity (UNEP-WCMC & IUCN, 2021b). While global marine coverage is approaching 8%, this figure drops to 1.2% in areas beyond national jurisdiction, leaving the vast majority of the planet's ocean with limited protection. Likewise, the extent to which the world's growing protected area network is effectively managed and equitably governed remains unclear (see Chapter 4). The contribution of other effective area-based conservation measures (OECMs) cannot be known until these measures have been identified and mapped.

Protected and conserved area priorities for Oceania countries are embodied in their *National Biodiversity Strategies and Action Plans (NBSAPs)* and other national policies. In July 2016, the CBD Secretariat together with eleven Pacific Island countries and regional partners formulated lists of national priority

BOX 2.1 THE WORLD DATABASE ON PROTECTED AREAS AND WORLD DATABASE ON OTHER EFFECTIVE AREA-BASED CONSERVATION MEASURES

The World Database on Protected Areas (WDPA) is the most comprehensive global database of protected areas, containing almost 266,000 records. The database has existed in various forms and under various names since 1959 and is now made available as a spatial database through www.protectedplanet.net.
The WDPA is used to track progress towards global commitments, including Aichi Target 11 and elements of Sustainable Development Goals 14 and 15.

The WDPA is now accompanied by a parallel database, the World Database on Other Effective Area-based Conservation Measures (WD-OECM). In line with the CBD definition of an OECM, this database stores information on measures that are not protected areas, but nevertheless achieve long-term positive outcomes for biodiversity conservation (CBD, 2018).

Since the WD-OECM does not yet contain data for the Pacific region, this chapter is based solely on the WDPA. In line with the global Protected Planet Report 2020 (UNEP-WCMC & IUCN, 2021b), the May 2021 version has been used for count and coverage statistics and the January 2021 version has been used for most other statistics. The May 2021 version has been modified to incorporate pending updates from Vanuatu and Timor-Leste.

For all analyses involving spatial analysis, points have been buffered to their reported area, the data has been flattened to remove overlaps, and certain records have been removed in line with the usual method for generating coverage statistics from the WDPA. The following records have been removed: UNESCO Man and the Biosphere Reserves; points with no reported area; and records with the status 'Proposed' or 'Not Reported'. There are certain limitations associated with the WDPA that will be discussed in detail later in the chapter.

Protected Planet website.
Source: https://www.protectedplanet.net

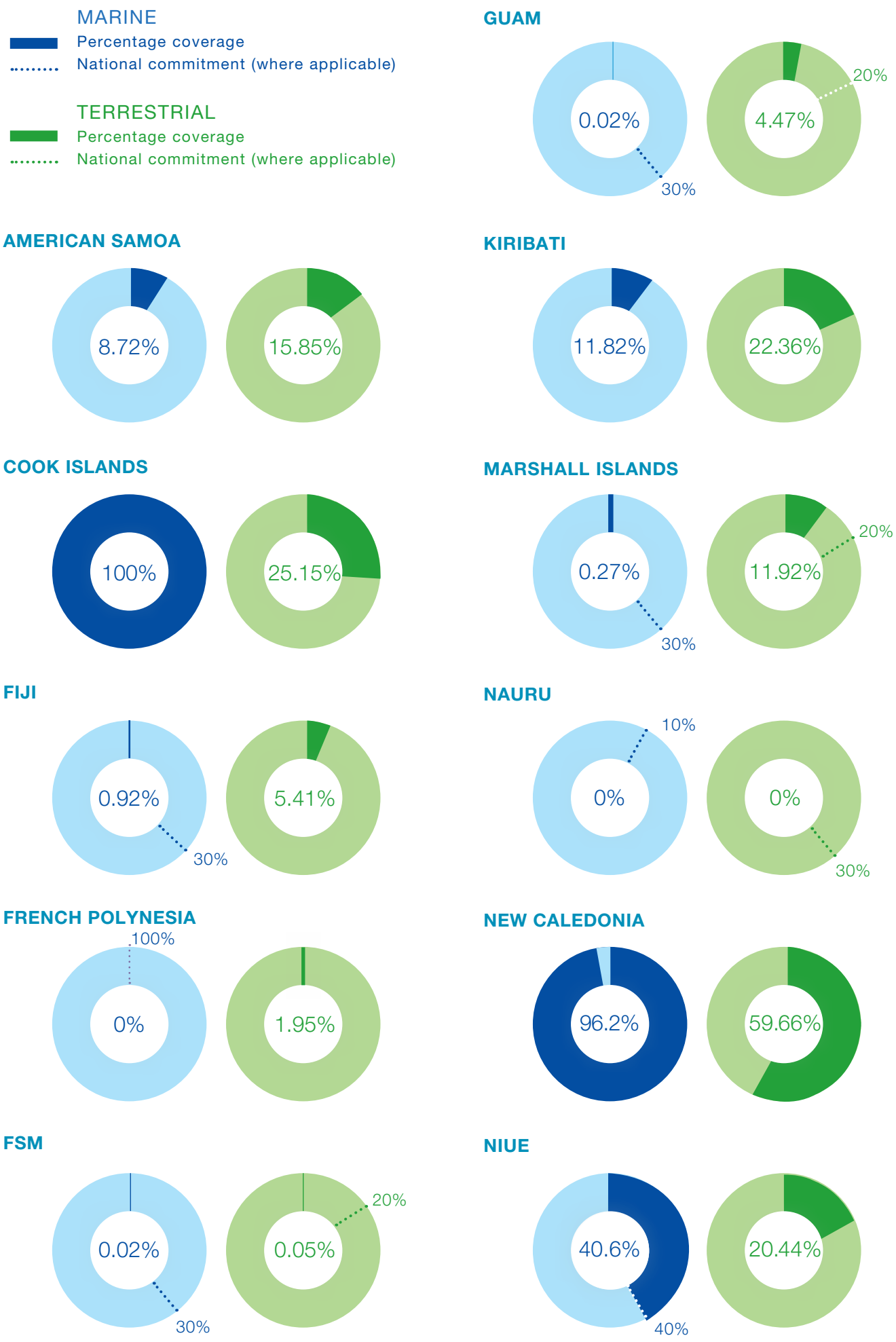
actions to be undertaken up to 2020, in support of the achievement of Aichi Biodiversity Targets 11 and 12[4] – often referred to as 'national roadmaps' (CBD Secretariat, 2017). For this process, country experts referred to existing national commitments for Aichi Biodiversity Targets 11 and 12 to be achieved by 2020, in line with their revised *NBSAP, Programme of Work on Protected Areas (PoWPA) Action Plan* or other national protected area planning documents, commitments of relevant national projects and gaps in commitments. These were compared with actual actions undertaken, and opportunities were identified to address gaps. The resulting national priority actions were intended to be undertaken in the subsequent four years, with the aim of improving the status of the elements of Aichi Biodiversity Targets 11 and 12 by 2020 at the national, regional and global levels.

This chapter explores the extent to which Oceania has met its international commitments, alongside national and territory level targets. It assesses the spatial elements of Aichi Target 11, including general coverage, coverage of important areas for biodiversity, ecological representativeness and connectivity.

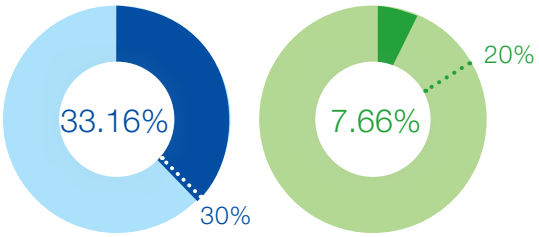
Endangered Grey Reef Shark (*Carcharhinus amblyrhynchos*) (© Stacy Jupiter/WCS)

[4] By 2020, the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.

FIGURE 2.1 Protected area percentage coverage. *Source: Compiled using data from UNEP-WCMC and IUCN (2021a)*



NORTHERN MARIANA ISLANDS



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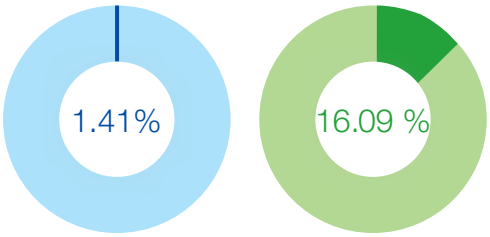
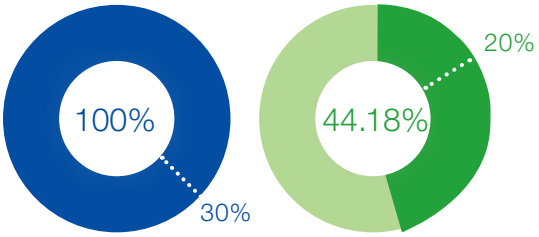


PALAU



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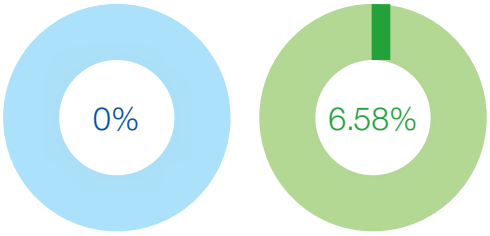
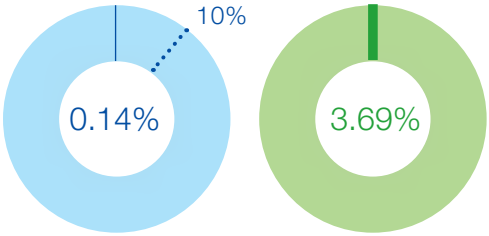


PAPUA NEW GUINEA



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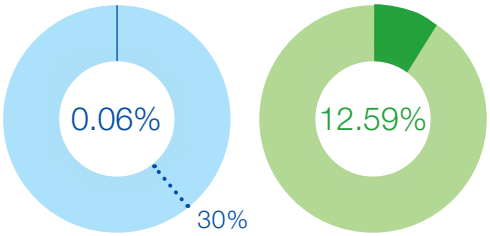

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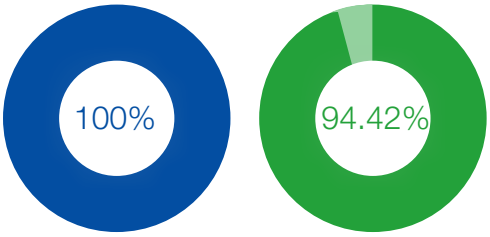

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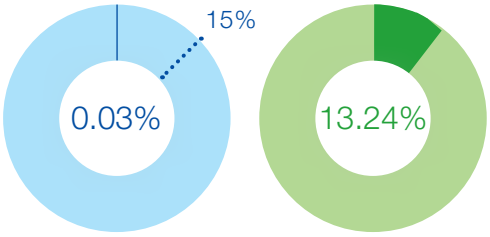

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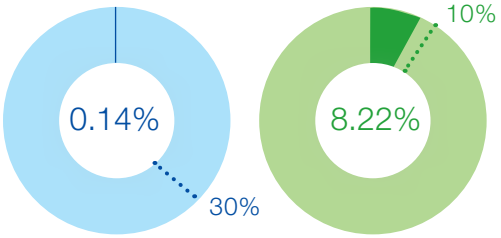

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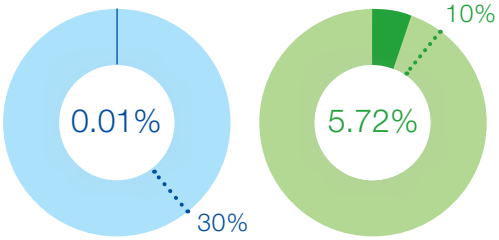

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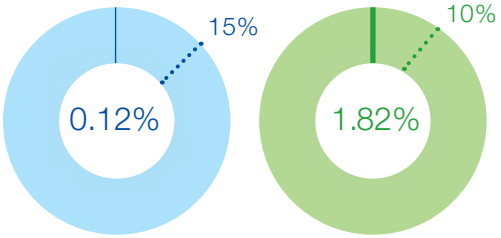
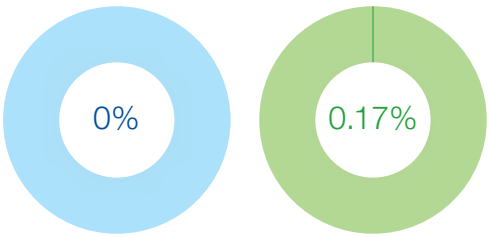


WALLIS AND FUTUNA



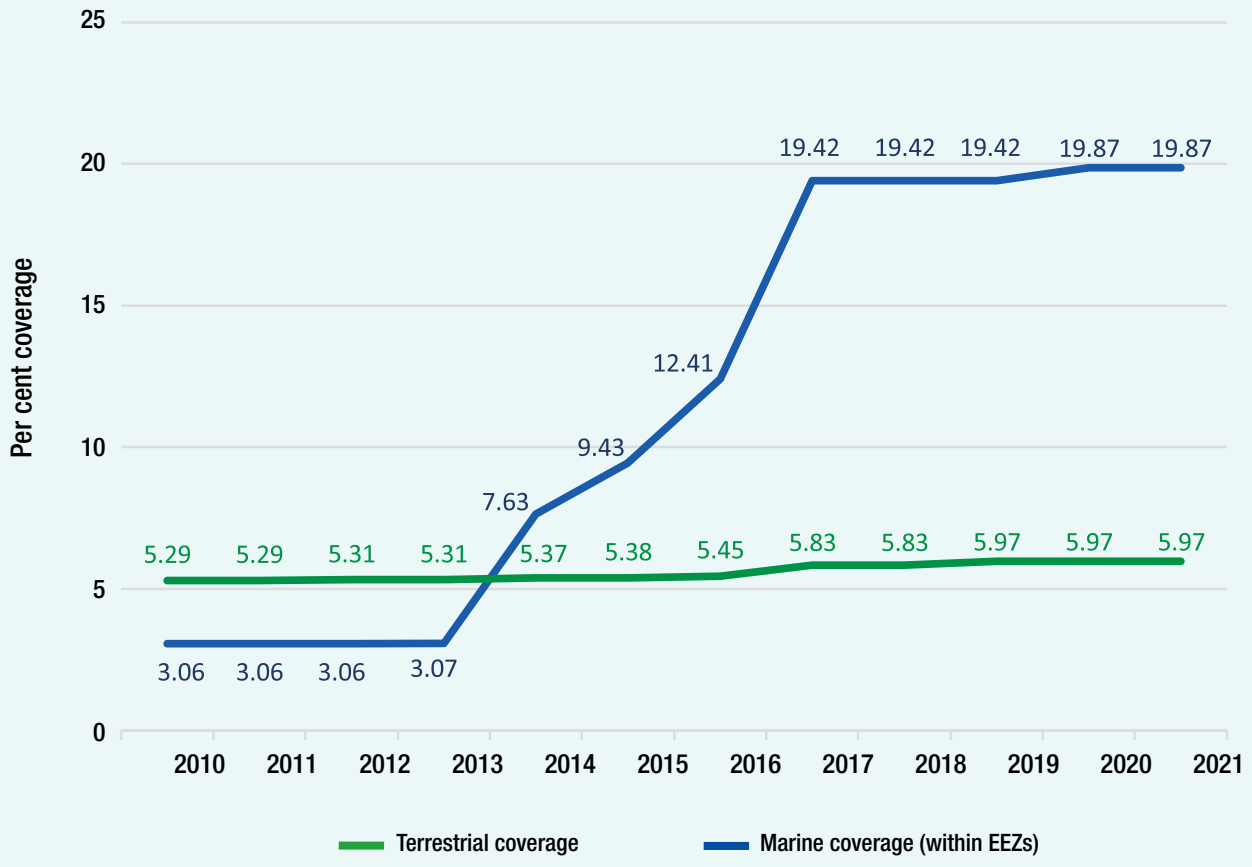


FIGURE 2.2 Increases in overall terrestrial and marine protected area coverage in Oceania since 2010.
Source: UNEP-WCMC and IUCN (2021a)

2.2 Coverage

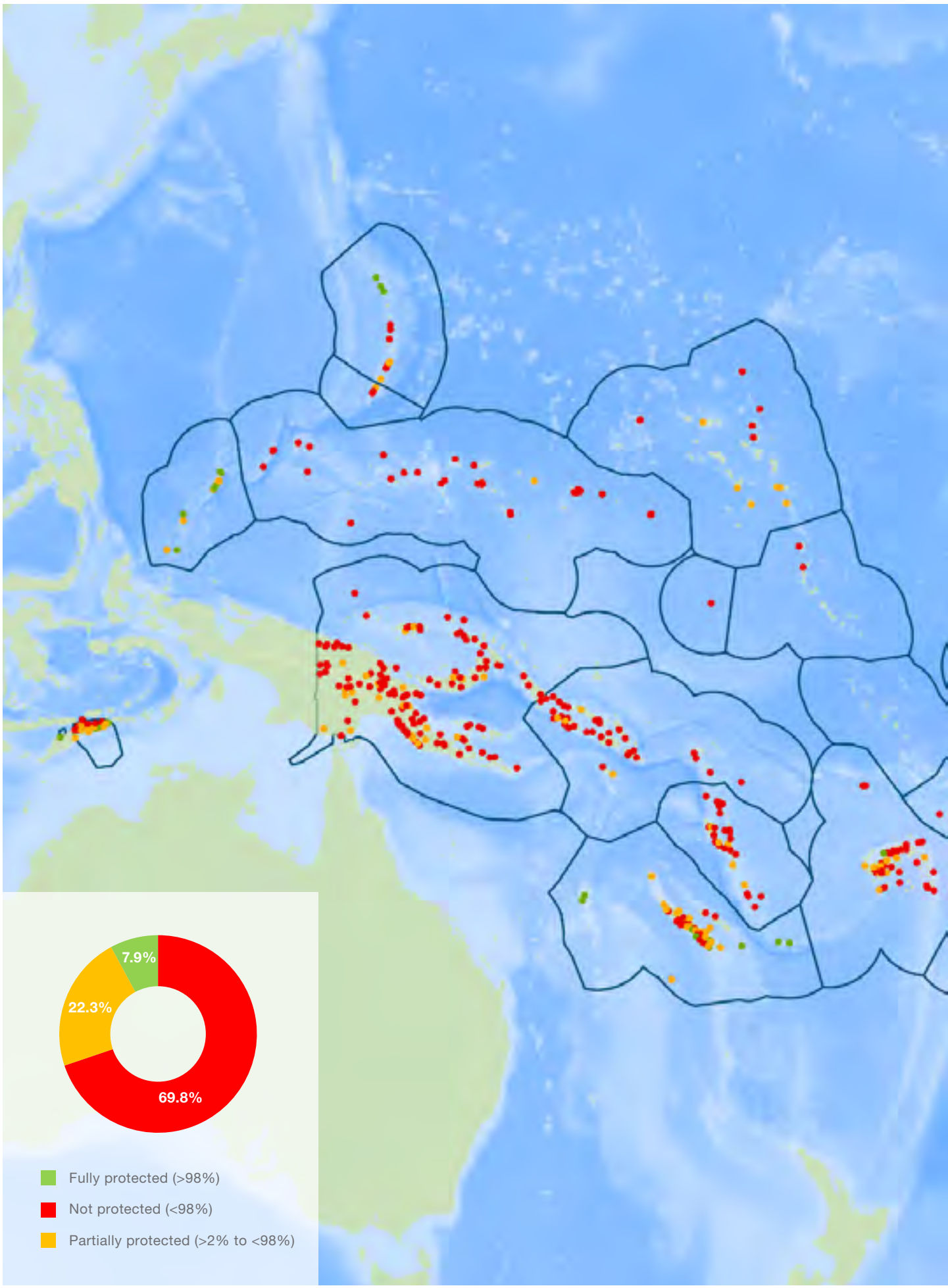
METHODOLOGY: The modified May 2021 WDPA was dissolved by country code (ISO3) and overlaid with the land and EEZ components of the base layer to determine the level of terrestrial and marine protection.

DATA SOURCE: Modified May 2021 WDPA (UNEP-WCMC & IUCN, 2021a) and World Vector Shoreline (base layer).[5]

Protected area coverage is the most commonly referenced indicator associated with Aichi Target 11, offering a simple measure of efforts contributing to halting biodiversity loss. The region-wide coverage of marine protected areas within EEZs is 19.9%, which is slightly higher in relative terms than the global figure of 17.8% (or 18% with OECMs) within national jurisdictions (UNEP-WCMC & IUCN, 2021b). The high level of marine coverage in Oceania is predominately the result of a small number of large-scale marine protected areas[6], designated by seven countries and territories, which constitute 96% of the area protected. In contrast, the region-wide terrestrial protected area coverage of 6% is well below the global level (15.7%, or 16.6% with OECMs) (UNEP-WCMC & IUCN, 2021b). The extent of protected area coverage varies greatly among the region's countries and territories, ranging from 0 to 100% in the marine realm and 0 to 94.4% on land (Figure 2.1). Three of the region's 23 countries and territories have achieved their nationally defined percentage coverage targets in their terrestrial or marine jurisdictions, or in both. Over the past decade, there has been a modest increase in terrestrial coverage in the region, while marine coverage has increased dramatically (Figure 2.2).

5 This dataset combines Exclusive Economic Zones (EEZ; VLIZ, 2014) and terrestrial country boundaries (World Vector Shoreline, 3rd edition, National Geospatial-Intelligence Agency). A simplified version of this layer has been published in Nature Scientific Data journal (Brooks et al., 2016) and is available at: http://datadryad.org/resource/doi:10.5061/dryad.6gb90.2

6 Marae Moana; Parc Naturel de la Mer de Corail; Niue Moana Mahu Marine Protected Area; Pitcairn Islands Marine Reserve; Palau National Marine Sanctuary; Phoenix Islands Protected Area; Marianas Trench Marine National Monument; and Mariana Trench National Wildlife Refuge.


7.9%
22.3%
69.8%
Fully protected (>98%)
Not protected (<98%)
Partially protected (>2% to <98%)

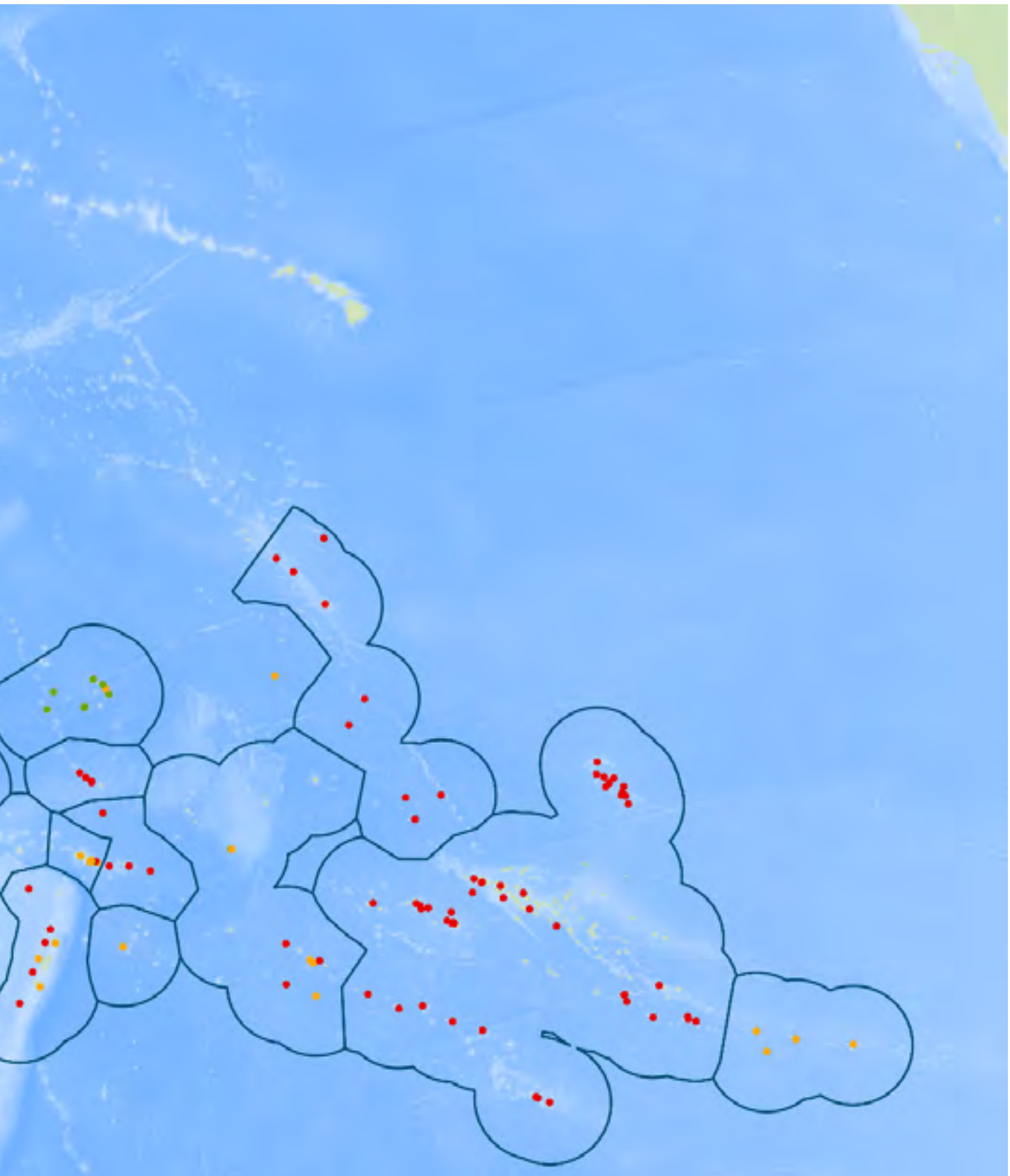


FIGURE 2.3 Protected area coverage of KBAs across Oceania (fully protected equates to ≥ 98% overlap with protected areas = green dots on map; partially protected equates to ≥ 2% to < 98% overlap = orange dots; not protected equates to < 2% overlap = red dots). *Source: Compiled using data from BirdLife International (2020) and UNEP-WCMC and IUCN (2020)*

2.3 Areas important for biodiversity

METHODOLOGY: All Key Biodiversity Areas (KBAs) with a mapped boundary in the World Database of KBAs were overlaid with protected areas with a mapped boundary in the November 2020 WDPA to determine their level of protection.[7]

DATA SOURCE: BirdLife International (2020); UNEP-WCMC and IUCN (2020) based on September 2020 World Database of Key Biodiversity Areas (polygons only) and November 2020 WDPA (polygons only).

Biodiversity is unevenly spread across the planet. Prioritising the protection of areas with higher species richness, endemism, concentrations of threatened species and diversity is a recognised and effective conservation strategy. Key Biodiversity Areas (KBAs) represent the global standard for identifying areas important for biodiversity, and are defined as "sites contributing significantly to the global persistence of biodiversity" (see Box 2.2). Although protected areas can contribute to conserving the important biodiversity within KBAs (Butchart et al., 2012), they may not always be the most appropriate conservation strategy in every situation.

In Oceania, approximately 8% of mapped KBAs are fully protected (≥ 98% covered by protected areas) and 22% are partially protected (≥ 2 to < 98% coverage) (Figure 2.3). The remaining 70% of KBAs are not included in protected areas (< 2% coverage), which is considerably higher in relative terms than the global figure of 34.5% (UNEP-WCMC & IUCN, 2021b). The mean percentage of each KBA that is covered by protected areas varies greatly between countries and territories in the region (Figure 2.4).

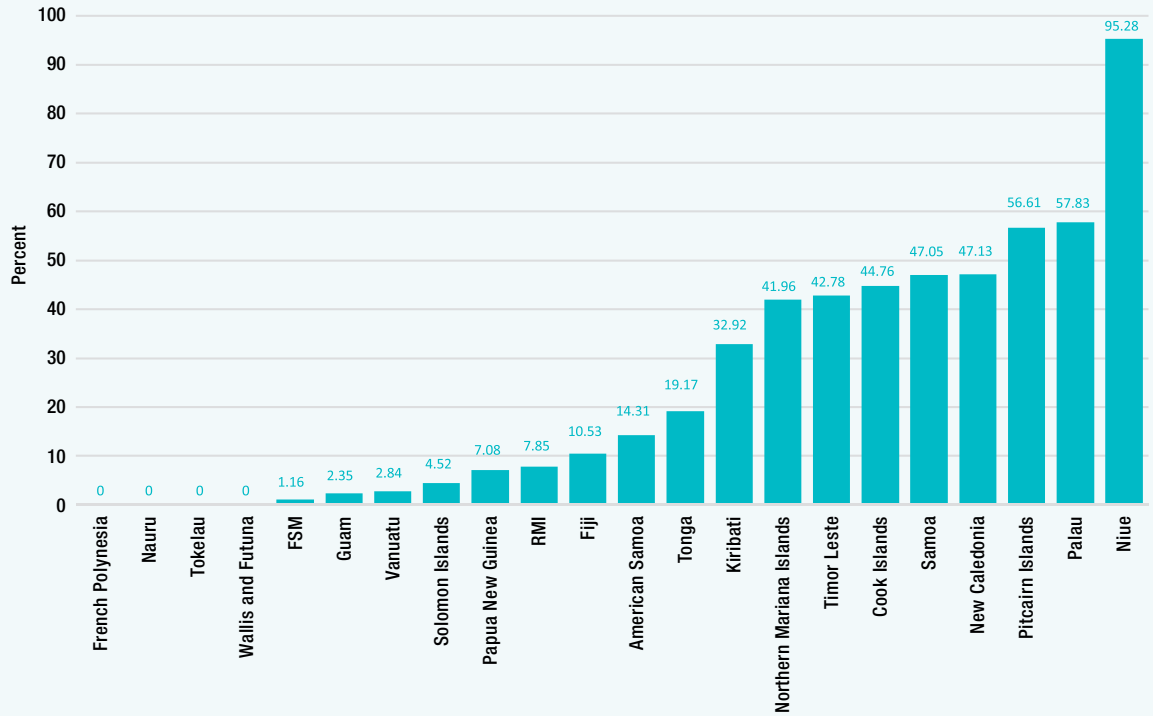


FIGURE 2.4 Mean percentage of each KBA overlapping with protected areas in the country or territory of the region. *Source: Compiled using data from BirdLife International (2020) and UNEP-WCMC and IUCN (2020)*

[7] For further information, see the metadata for the corresponding SDG Indicators (available at https://unstats.un.org/sdgs/metadata/)

BOX 2.2 KEY BIODIVERSITY AREAS PARTNERSHIP IN THE PACIFIC

Dr Mark O'Brien, Pacific Regional KBA Focal Point, BirdLife International

The *Global Standard for the Identification of Key Biodiversity Areas* sets out globally agreed criteria for the identification of important areas for biodiversity worldwide (IUCN, 2016). In the Pacific, the KBA concept was first applied in the early 2000s. Today, there are around 600 KBAs across the region – many of which were identified as a) *Important Bird and Biodiversity Areas*, b) *Alliance for Zero Extinction sites* or c) through the Ecosystem Profiles prepared by the *Critical Ecosystem Partnership Fund* (CEPF) for the Polynesia/Micronesia and East Melanesian Islands biodiversity hotspots.

The KBA partnership, comprising 13 of the world's leading nature conservation organisations, was established at the World Conservation Congress, Hawaii, in 2016. The new Global Standard was published in the same year, but has yet to be applied widely in Oceania. Nevertheless, preliminary assessments suggest that most existing KBAs will continue to meet the standard, and further research will likely lead to the delineation of new KBAs. The process of updating KBA assessments and identifying new sites will be undertaken through National Coordination Groups, reviewed by the KBA regional focal point and then independently assessed and validated prior to being included on the official World Database of Key Biodiversity Areas: http://www.keybiodiversityareas.org/.

KBA
KEY BIODIVERSITY AREAS

Central Savai'i Rainforest KBA, Samoa (© Stuart Chape)

2.4 Ecological representativeness

METHODOLOGY: The January 2021 WDPA was overlaid with a combined ecoregion layer (terrestrial, marine and pelagic provinces) from the below mentioned data sources. The marine ecoregions were clipped to the coastline of the terrestrial ecoregions and an outer boundary corresponding to the 200-metre isobath (Spalding et al., 2007).

DATA SOURCE: January 2021 WDPA (UNEP-WCMC & IUCN, 2021c) and Terrestrial Ecoregions of the World (Olson et al., 2001), Marine Ecoregions of the World (Spalding et al., 2007) and Pelagic Provinces of the World (Spalding et al., 2012).

As well as protecting important areas and species, protected areas should include viable samples of the full range of ecosystem and habitat types. This is important to ensure that the diversity of life and of landforms is conserved into the future. Ecoregions are categorised geographical regions with similar ecological characteristics such as habitat, fauna and climatic conditions. Analysing the extent to which protected areas cover ecoregions allows ecological representativeness to be measured at a broad scale.

Thirty-six terrestrial ecoregions lie partially or fully within the Oceania region. Seven of these have more than 17% of their extent within protected areas, while eight have less than 1% (Figure 2.5). Beyond the water's edge, 33 marine ecoregions and pelagic provinces lie partially or fully within the EEZs of the region. Fourteen of these have 10% or more of their extent within protected areas (Figure 2.6). The results suggest significant disparities in the extent to which ecoregions are protected in Oceania, reflecting a broader global pattern (UNEP-WCMC & IUCN, 2021b). Box 2.3 describes how marine spatial planning techniques, combined with stakeholder consultations, can be used to ensure that marine protected area networks are representative.

Funafuti Conservation Area, Tuvalu (© Vainuupo Jungblut)

BOX 2.3 TONGA IS LEADING THE WORLD IN ACHIEVING MARINE PROTECTION

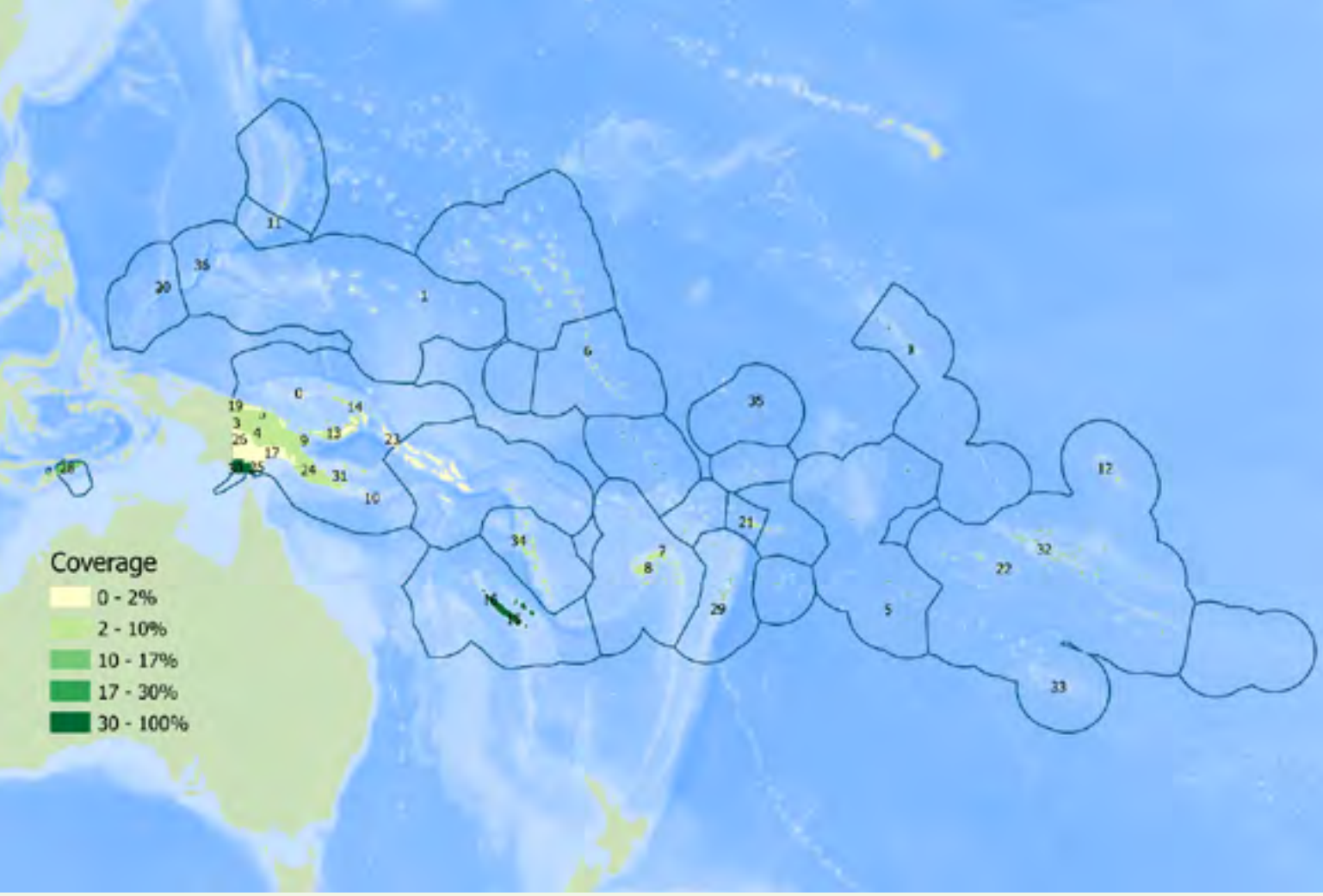
Marian Gauna and Hans Wendt (IUCN Oceania, Marine Programme)

The Kingdom of Tonga has an Exclusive Economic Zone (EEZ) estimated at nearly 700,000 km^2, which is used for both domestic and international activities such as inshore and offshore fisheries, shipping and transportation, tourism and potential future activities like deep-sea mining. Many marine resources in Tonga have long been identified as being at risk or already in decline (Thaman et al., 1997). The Tongan Government is taking steps to address threats to their inshore marine resources by supporting the more widespread establishment of inshore Special Management Areas, which allow local communities to manage their adjacent inshore marine environment, including through the establishment of no-take areas. However, in the deeper offshore areas, Tonga is experiencing increasing pressure from shipping, export fisheries from long-lining for tuna, underwater cabling, cruise ship tourism, whale-watching tourism, deep sea mineral exploration and other exploitative uses.

In July 2015, Tonga's Cabinet recognised this problem and decided to implement Oceania's first marine spatial plan. In 2016 at the Pacific Ocean Summit in Hawaii, Tonga's Deputy Prime Minister, Hon. Siaosi 'O. Sovaleni, announced Tonga's commitment to designating a network of marine protected areas covering 30% of its EEZ through a Marine Spatial Planning (MSP) process. After cabinet approval, a high-level technical committee known as the 'Ocean7' (see photo) was established and tasked to lead the process for Tonga and its people.

With technical advice from the IUCN Oceania Office and funding support from the German Ministry for Environment, Nature Conservation and Nuclear Safety and Oceans 5, Tonga has, over the years, collated relevant data and built the foundation for the MSP. The first round of nationwide consultation was completed between September 2018 and March 2019 with the aim of introducing 'ocean planning' to communities and stakeholders. This was conducted through workshops, meetings and the gathering and sharing of information relating to 1) ocean activities in both offshore and inshore areas, 2) Tonga's ocean plan and 3) marine spatial planning tools. A key achievement for both the Kingdom and IUCN was the development of a draft MSP map for Tonga, which included at least 20% of every marine bioregion (ensuring a completely ecologically representative network of marine protected areas) and including 30% coverage overall. With significant review from national experts and the Ocean7 committee, achieved through a technical workshop held in-country, the draft MSP map was finalised with at least 30% coverage achieved overall. In addition, three of four reef-associated marine bioregions and 12 of 21 deepwater bioregions achieved 20% protection. Tonga has completed the second round of consultations on the draft MSP plan with all communities. In July 2021, the final plan was approved by Cabinet and preparations are underway to launch the Marine Spatial Plan by December 2021.

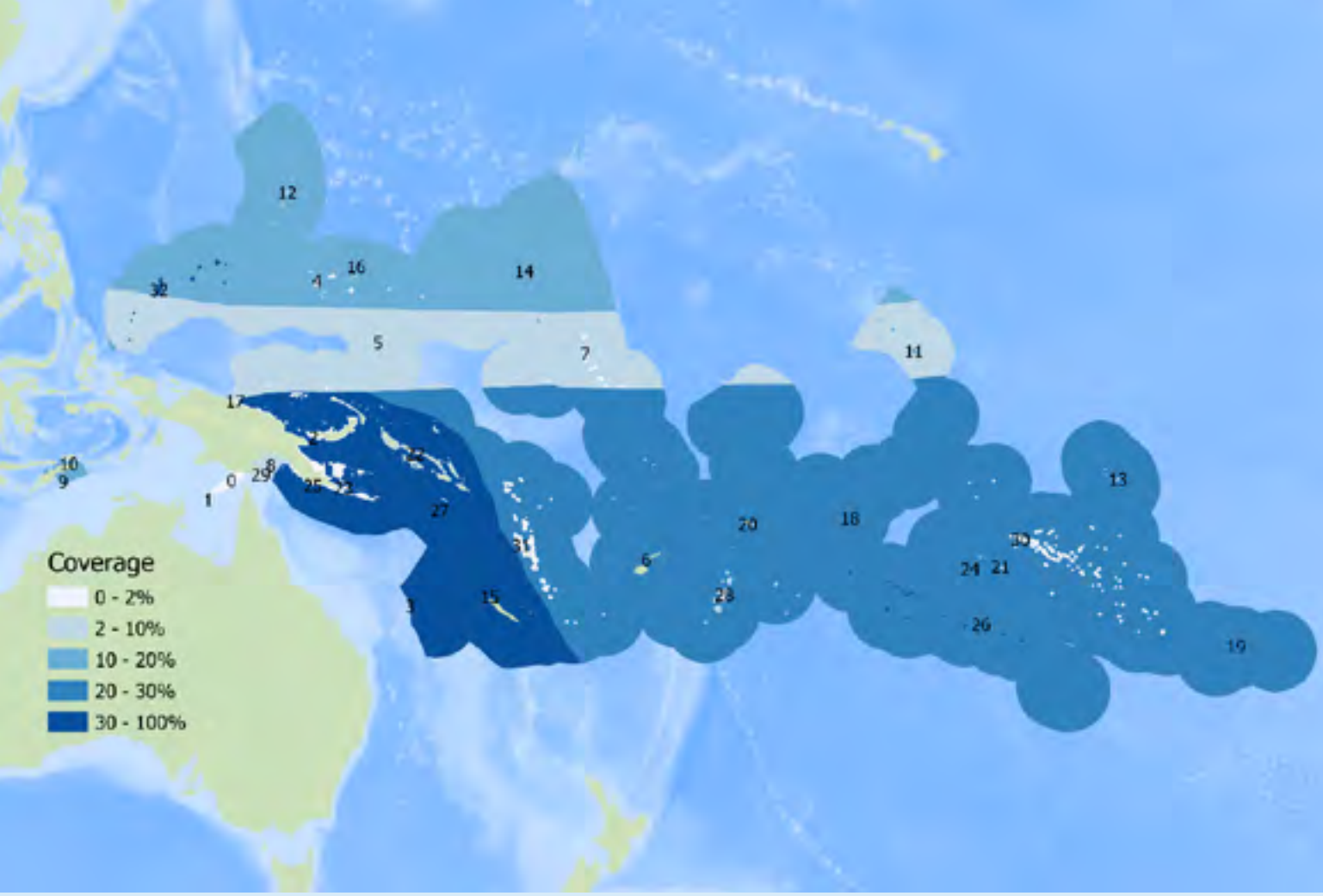
Marine spatial planning discussion by the Ocean 7 Committee (© Tonga Ocean 7) Committee)



Key	Ecoregion name	% of ecoregion protected in Oceania	% of ecoregion within Oceania
0	Admiralty Islands lowland rainforests	1.66	100
1	Carolines tropical moist forests	0.03	100
2	Central Polynesian tropical moist forests	87.62	91.34
3	Central Range montane rainforests	3.57	56.49
4	Central Range sub-alpine grasslands	3.61	37.3
5	Cook Islands tropical moist forests	18	100
6	Eastern Micronesia tropical moist forests	3.86	97.52
7	Fiji tropical dry forests	2.77	100
8	Fiji tropical moist forests	4.98	100
9	Huon Peninsula montane rainforests	3.54	100
10	Louisiade Archipelago rainforests	0	100
11	Marianas tropical dry forests	3.94	100
12	Marquesas tropical moist forests	3.47	100
13	New Britain-New Ireland lowland rainforests	2.91	100
14	New Britain-New Ireland montane rainforests	0.54	100
15	New Caledonia dry forests	56.2	100
16	New Caledonia rainforests	60.16	100
17	New Guinea mangroves	1.6	20.57

Key	Ecoregion name	% of ecoregion protected in Oceania	% of ecoregion within Oceania
18	Northern New Guinea lowland rain and freshwater swamp forests	2.72	55.89
19	Northern New Guinea montane rainforests	0	28.46
20	Palau tropical moist forests	35.95	100
21	Samoan tropical moist forests	8.07	100
22	Society Islands tropical moist forests	2.32	100
23	Solomon Islands rainforests	1.28	100
24	Southeastern Papuan rainforests	3.31	100
25	Southern New Guinea freshwater swamp forests	0	49.19
26	Southern New Guinea lowland rainforests	1.59	38.37
28	Timor and Wetar deciduous forests	15.96	44.88
29	Tongan tropical moist forests	13.55	100
30	Trans Fly savannah and grasslands	33.25	68.66
31	Trobriand Islands rainforests	6.98	100
32	Tuamotu tropical moist forests	12.63	100
33	Tubuai tropical moist forests	0	100
34	Vanuatu rainforests	4.31	100
35	Western Polynesian tropical moist forests	74.75	97.94
36	Yap tropical dry forests	0	100

FIGURE 2.5 Protected area coverage of terrestrial ecoregions. *Source: Compiled using data from UNEP-WCMC and IUCN (2021c) and Olson et al. (2001)*



Key	Ecoregion name	% of ecoregion protected in Oceania	% of ecoregion within Oceania
0	Arafura Sea	0.02	7.61
1	Arnhem Coast to Gulf of Carpentaria	0	<0.01
2	Bismarck Sea	0.61	100
3	Coral Sea	99.94	0.29
4	East Caroline Islands	1.33	100
5	Equatorial Pacific*	9.97	42.82
6	Fiji Islands	21.26	100
7	Gilbert/Ellice Islands	1.15	100
8	Gulf of Papua	4.47	98.14
9	Indonesian Through-Flow*	10.77	1.05
10	Lesser Sunda	10.06	9.38
11	Line Islands	14.37	52.97
12	Mariana Islands	9.08	100
13	Marquesas	0.88	100
14	Marshall Islands	12.1	99.32
15	New Caledonia	84.52	100
16	North Central Pacific*	10.03	13.1
17	Papua	0	0.55

Key	Ecoregion name	% of ecoregion protected in Oceania	% of ecoregion within Oceania
18	Phoenix/Tokelau/Northern Cook Islands	68.31	95.41
19	Rapa-Pitcairn	58.23	100
20	Samoa Islands	5.89	100
21	Society Islands	2.39	100
22	Solomon Archipelago	3.05	100
23	Solomon Sea	0.24	100
24	South Central Pacific*	22.02	36.87
25	Southeast Papua New Guinea	0	100
26	Southern Cook/Austral Islands	57.92	100
27	Southwest Pacific*	31.83	42.52
28	Tonga Islands	6.68	100
29	Torres Strait Northern Great Barrier Reef	0.13	0.14
30	Tuamotus	0.05	100
31	Vanuatu	0.16	98.58
32	West Caroline Islands	60.52	100

FIGURE 2.6 Protected area coverage of marine ecoregions and pelagic provinces (within the EEZ of the countries and territories of the region). Pelagic provinces are indicated by *. *Source: Compiled using data from UNEP-WCMC and IUCN (2021c), Spalding et al. (2007) and Spalding et al. (2012)*

2.5 Terrestrial connectivity

METHODOLOGY: The ProtConn indicator (Saura et al., 2018) was used for the connectivity analysis. This indicator calculates the percentage of a country or territory covered by protected and connected land. The indicator considers the spatial arrangement, size and coverage of protected areas, and accounts for both the land area that can be reached by species moving within protected areas and that which is reachable through the connections between different protected areas. The analysis includes all protected areas in the January 2021 WDPA (polygons and buffered points) not smaller than 1 km^2, except protected areas with a 'proposed' or 'not reported' status, sites reported as points without an associated reported area, and UNESCO Man and Biosphere Reserves (Saura et al., 2018). The indicator is calculated through network analysis, with the Probability of Connectivity and the Equivalent Connected Area as the underlying metrics. The analysis assumes that dispersal between sites follows a negative exponential distribution (i.e. that movement between more widely spaced sites is progressively less probable). The statistics presented in this chapter assume a reference species median dispersal distance of 10 km. In other words, it is assumed that half of the individuals or propagules of the species of interest would be able to travel between two patches spaced 10 km apart, and that progressively smaller numbers would be able to cross larger separation distances. The ProtConn indicator, as applied here, considers all protected lands to be favourable for species movement and all unprotected lands to be equally hostile to movement. As a result, it does not take into account the characteristics of the landscape matrix and of the variable species-specific responses to these. For further details see Saura et al. (2017, 2018, 2019), JRC (2019) and the indicator website: https://www.bipindicators.net/indicators/protected-connected.

DATA SOURCE: January 2021 WDPA; and Global Administrative Unit Layers (GAUL) revision 2015 (2017-02-02).

Well-connected systems of protected areas allow natural processes such as species dispersal to continue across land- and seascapes. The ProtConn indicator, developed for global CBD reporting, quantifies how well terrestrial protected area systems support connectivity. Importantly, the indicator excludes the influence of natural isolation caused by the sea (Saura et al., 2018). This allows for fair comparisons even between island states.

In Oceania, the extent to which terrestrial protected areas are connected – purely based on their spatial arrangement, size and coverage – varies greatly. Pitcairn Islands (58%) and New Caledonia (56%) have the highest level of land both protected and connected (Figure 2.7). From 2010 to 2018, compared to other regions of the world, Oceania experienced the largest increase in terrestrial protected area connectivity (Saura et al., 2019). A corresponding indicator for the connectivity of marine protected areas is not yet available. Addressing this gap is crucial to understanding the contribution of protected and conserved areas to biodiversity conservation in maritime states and territories.

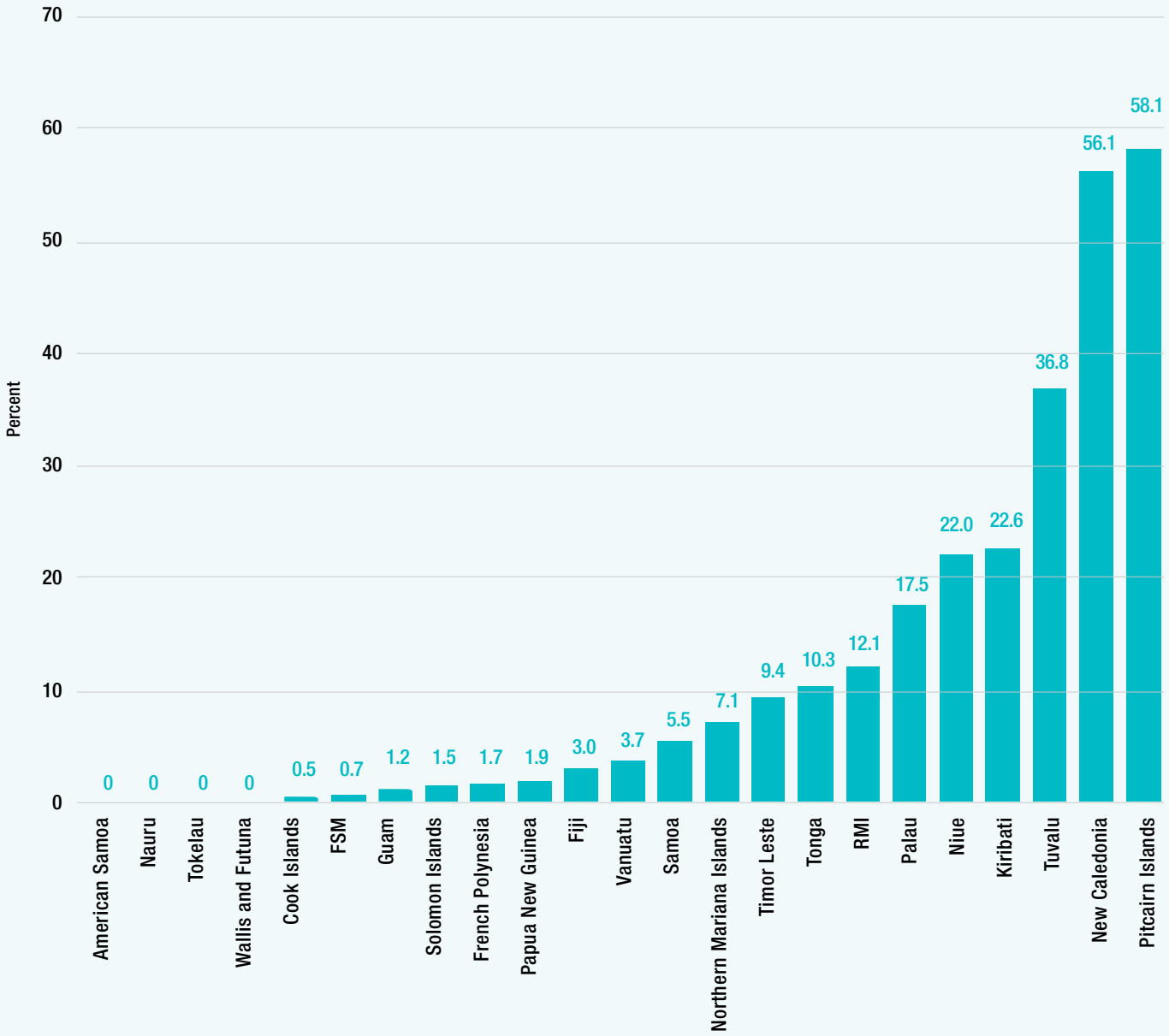


FIGURE 2.7 Percentage of country or territory covered by protected and connected land for a reference species median dispersal distance of 10 km.[8] *Source: UNEP-WCMC and IUCN (2021c)*

[8] Since the ProtConn indicator represents the percentage of land that is both protected and connected, it should never be greater than a country's terrestrial percentage coverage by protected areas. Where this does occur, it is due to variations in the terrestrial boundaries used in the ProtConn and protected area coverage analyses.

2.6 State of the WDPA data for Oceania

The analysis within this chapter is predominantly based on the WDPA, which is the most comprehensive and standardised dataset for the region. However, this data does have limitations with some countries reporting different figures in their sixth CBD national reports (Table 2.1). The most notable of these limitations are the following:

- Although 70% of countries and territories in the region have at least partially updated their WDPA data in the last five years, subsets of the data remain out of date (Table 2.1; Figure 2.8).
- A considerable number of protected areas in the region do not have boundary data in the WDPA. Six of the 23 countries and territories covered in this analysis (or about 26%) have more point than polygon (boundary) data. This indicates that many areas are not formally mapped, or their boundary data not shared. Importantly, within the modified May 2021 WDPA, 47% of points have the governance type 'local communities' or 'indigenous peoples' (compared to 35% of polygons). This may indicate a correlation between the lack of boundary data and community governance arrangements.
- It is widely recognised that protected areas under the governance of private actors, indigenous peoples and local communities are under-reported to the WDPA (Bingham et al., 2017; Corrigan et al., 2016). This is particularly relevant for Oceania, where community-based management is the most common mode of area-based conservation, owing to extensive customary ownership in the region. As Govan (2015) highlights: "with the exception of Tonga, between 81–98 per cent of the land in independent Melanesia and Polynesia remains under some form of customary tenure". For example, in a dataset recently submitted by Samoa's government for review by SPREP, 73.5% of 200 sites are designated as 'community-based' or 'community conserved'.
- Some communities and governments are reluctant to share their protected area data, fearing that this may lead to tenure disputes or increased encroachment. Communities may also be concerned about formalising their conservation areas, perceiving that it could lessen their autonomy and rights over customary lands (Govan & Jupiter, 2013).
- Conflicting datasets sometimes exist across different agencies, and in certain cases a lack of inter-agency coordination has made the task of consolidating one agreed national dataset difficult.
- As with most of the world, OECMs have yet to be formally mapped in Oceania and therefore could not be fully taken into account for this chapter. If identified through participatory processes and given appropriate support, OECMs may provide an opportunity to recognise the contributions of an even more diverse range of conservation actors across the region.

SPREP is working with governments and other partners in the Pacific to address these gaps, an effort which in recent years has been supported by BIOPAMA in partnership with UNEP-WCMC (Box 2.4). SPREP has now facilitated the submission of new or updated data for eight Pacific Island countries (Niue, Palau, Papua New Guinea, Cook Islands, Samoa, Solomon Islands, Tonga and Tuvalu) (Figure 2.8). Further updated data for Pitcairn Islands, Timor-Leste, Guam, American Samoa, Northern Mariana Islands and New Caledonia have been submitted directly to UNEP-WCMC since 2019. There is a continuing need to update national datasets to ensure global targets can be accurately tracked, and to inform planning and decision-making at national levels. Moreover, many countries in the region rely on the WDPA to support their national CBD reporting requirements. Box 2.5 illustrates the importance of this work.

TABLE 2.1 Year of most recent WDPA update and comparison of coverage figures between the WDPA and sixth national reports to the CBD Secretariat[9]

		Percentage coverage			
		Terrestrial		Marine (within EEZ)	
Country / territory	Year of most recent update WDPA	Modified May 2021 WDPA	6th National Report	Modified May 2021 WDPA	6th National Report
Nauru^#		0	2	0	
Papua New Guinea	2019	3.69	3.98	0.14	0.21
Tonga	2019	12.59	16	0.06	
Tuvalu	2019	13.24	19	0.03	0.03
Timor-Leste	2019	16.09	15.89	1.41	0.57
Niue	2020	20.44	20	40.6	40
Palau#	2019	44.18		100	
Solomon Islands	2020x	1.82	5.04	0.12	6.00[0]
New Caledonia*	2019x	59.66		96.2	
Pitcairn Islands	2021x	94.42		100	100
Kiribati*	2017x	22.36		11.82	
Cook Islands*	2020	25.15		100	
Federated States of Micronesia	2016	0.05	15	0.02	39
Northern Mariana Islands*	2021	7.66		33.16	
American Samoa*	2021	15.85		8.72	
Guam*	2021	4.47		0.02	
Fiji*	2015	5.41		0.92	
RMI	2015	11.92	12	0.27	29
Vanuatu#	2010x	5.72		0.01	
Samoa#	2020x	8.22		0.14	
French Polynesia#	2008x	1.95		0	
Tokelau#	2008	6.58		0	
Wallis and Futuna#	2003	0.17		0	

^ No protected areas;

6th National Report completed but did not report on protected area coverage;

* 6th National Report has yet to be prepared by the country;

x Partial update of WDPA;

0 Coastal and marine protected areas.

Source: UNEP-WCMC and IUCN, 2021a; Sixth national reports to the CBD Secretariat

9 Where figures were given in km^2 or ha in the reports, they have been converted to percentages using the base layer. National coverage targets are also shown, in addition to the year of most recent update in the WDPA (as at May 2021. Excludes international designations).

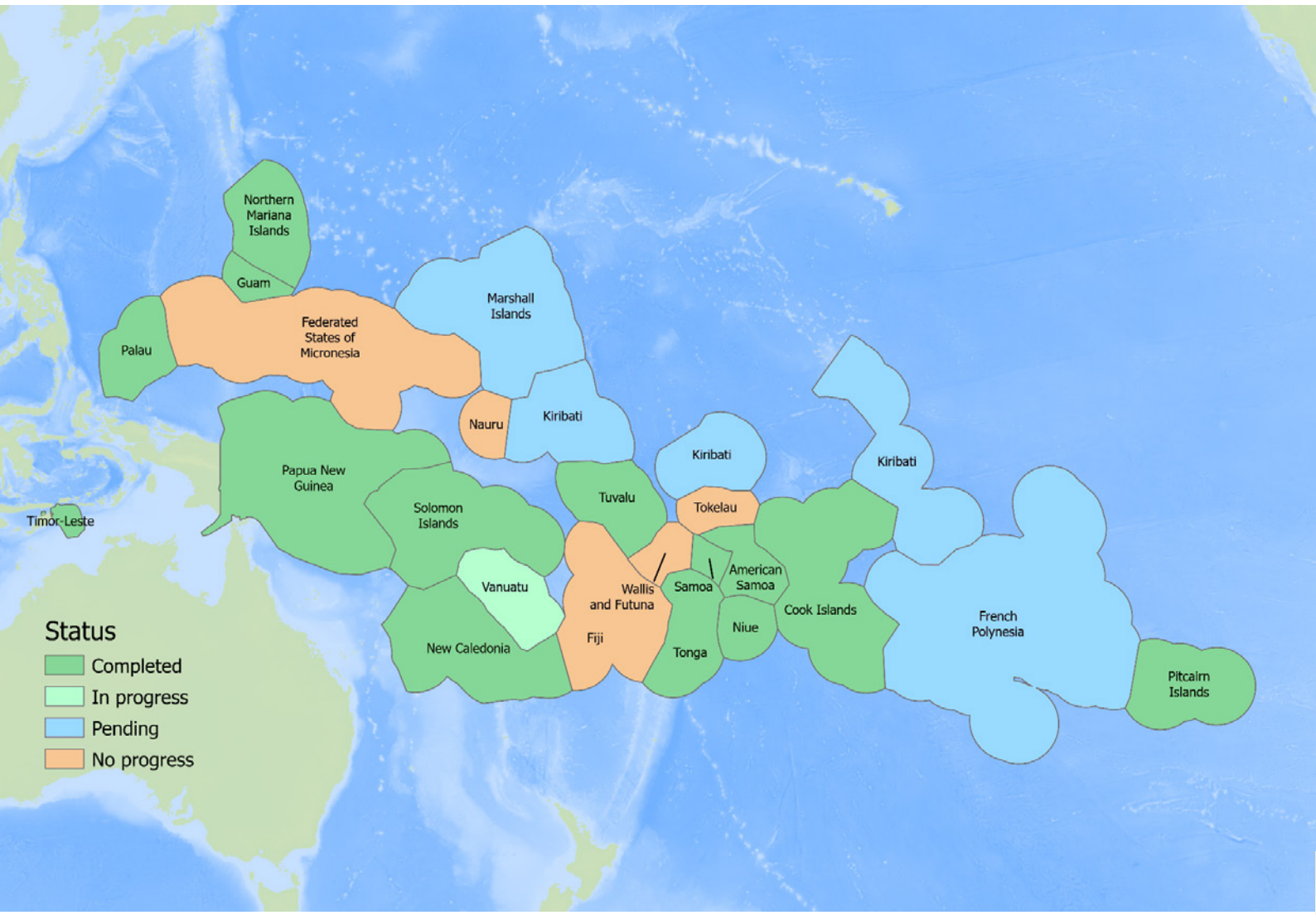


FIGURE 2.8 Status of protected area data updates in the WDPA (May 2021). *Source: UNEP-WCMC and IUCN, 2021a*

BOX 2.4 SECRETARIAT OF THE PACIFIC REGIONAL ENVIRONMENT PROGRAMME (SPREP) – SUPPORTING PROTECTED AREA DATA COLLATION AND COORDINATION

The Secretariat of the Pacific Regional Environment Programme (SPREP) is the recognised regional data collation, coordination and resource hub for protected areas in Oceania. This work is currently being supported by BIOPAMA (see Box 1.1). SPREP collaborates closely with the Secretariat of the Convention on Biological Diversity (CBD). This collaboration is formalised through recurring memoranda of understanding, which recognise SPREP as the coordination focal point for CBD activities and initiatives. SPREP also has a formal agreement with UNEP-WCMC to be the regional collator of WDPA data.

In this role, SPREP is assisting its members to implement CBD protected area-related decisions (including the Programme of Work on Protected Areas) and national protected area priorities (such as NBSAPs). It is also supporting countries to collect and collate protected area data to inform improved decision-making. In addition, SPREP provides coordination support for regional partner organisations, through the Pacific Islands Roundtable for Nature Conservation (PIRT), to align their activities towards a coherent implementation of the Pacific Islands Framework for Nature Conservation and Protected Areas 2021–2025 (see Box 1.2).

Moreover, the regional organisation has joined the Global Partnership on Aichi Target 11, which was launched in November 2018 on the margins of the fourteenth meeting of the Conference of the Parties to the CBD, in Sharm El-Sheikh, Egypt. The Target 11 Partnership aims "to facilitate the achievement of Target 11 in a concerted manner. The Partnership is expected to stimulate regional implementation support networks and donors to align their activities towards the decentralized implementation of focused actions for the achievement of Target 11" (CBD Secretariat, 2019).

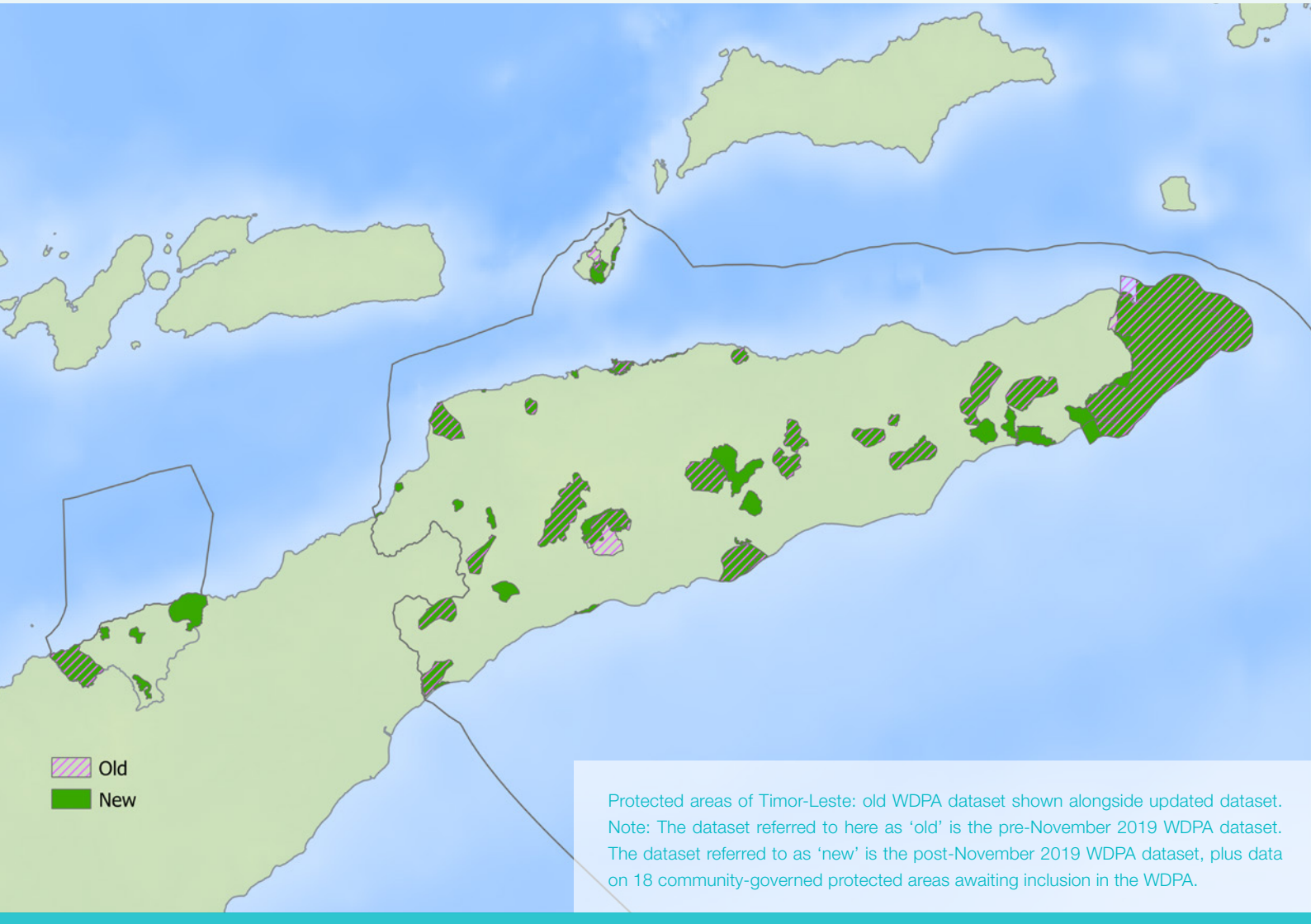
Technical workshop convened by SPREP with protected area stakeholders in Palau (© SPREP)

BOX 2.5 THE IMPORTANCE OF REGULARLY UPDATING THE WDPA

Timor-Leste's WDPA dataset was updated in November 2019. Although the previous dataset was only three years old, making it relatively up to date, the recent update had a significant impact on Timor-Leste's national statistics (see map).

The new dataset sees Timor-Leste's protected areas almost triple from 22 to 63. As a result, the country's terrestrial protected area coverage increases from 13% to 16.1%. Marine coverage increases more modestly, from 1.37% to 1.41%. Although the total coverage of marine KBAs is reduced slightly, it remains high at 61.6%. Total coverage of terrestrial KBAs, however, increases from 42.9% to 48.3%. Finally, there is a distinct increase in the proportion of Timor-Leste's 30 KBAs (for which boundaries are available) with at least partial protection, rising from 53% to 70%.[10]

Beyond providing a more accurate picture of conservation in Timor-Leste, the update significantly enhances the dataset's utility to decision-makers, ranging from those seeking to avoid causing damage to protected areas to those aiming to expand conservation initiatives into the areas where they are most needed.



Protected areas of Timor-Leste: old WDPA dataset shown alongside updated dataset. Note: The dataset referred to here as 'old' is the pre-November 2019 WDPA dataset. The dataset referred to as 'new' is the post-November 2019 WDPA dataset, plus data on 18 community-governed protected areas awaiting inclusion in the WDPA.

[10] This analysis uses the September 2019 World Database of Key Biodiversity Areas.

2.7 Conclusion

Oceania is making a significant contribution to the global effort to conserve the planet's biodiversity, with 30% of countries and territories in the region exceeding the Aichi Target 11 benchmarks for either terrestrial or marine coverage (Northern Mariana Islands, Niue, Kiribati, Cook Islands, Palau, New Caledonia and Pitcairn Islands). Marine coverage has increased significantly over the last decade, almost exclusively due to seven countries and territories protecting large parts of their maritime zones.

Despite the significant progress made, further effort and investment is needed to create networks of fully connected and representative protected and conserved areas. For example, in relative terms region-wide terrestrial protected area coverage is almost 10 percentage points below the global figure, 70% of Key Biodiversity Areas remain unprotected and numerous ecoregions are below representation targets. Moreover, a method for assessing marine connectivity, while needed worldwide, is particularly important to assess the contribution of protected and conserved areas to marine conservation in the region.

Shortfalls can be partly attributed to underfunding, competing development priorities, and lack of capacity and available mechanisms to support community-based governance. Moreover, many indigenous peoples' and community-based protected and conserved areas are still to be formally mapped. The subsequent chapters explore these issues in more detail. Regional coordination will continue to be important, particularly technical support and channelling of funds to national and on-the-ground initiatives. Multilateral collaborations such as the Micronesia Challenge can inspire, encourage and catalyse tangible progress among participating countries. Lastly, more accurate data is critical for enhancing our understanding of the state of protected and conserved areas in the region. Further mapping of area-based conservation measures is required to support national level decision-making and reporting, and to inform sustainable use planning across the landscape and seascape. This process should be carried out in collaboration with, and with the informed consent of, local communities and rightsholders.

Nino Konis Santana National Park, Timor-Leste (© Paul van Nimwegen/IUCN)

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CHAPTER 3

LAW AND GOVERNANCE

Humpback whale, Cook Islands (© The Ocean Agency)

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LAW AND GOVERNANCE

CHAPTER 3

Law and governance

3.1 Introduction

Both customary laws and formal legislation provide the basis for establishment, recognition and management of protected and conserved areas, within broader land- and seascapes. Appropriate laws and equitable governance are underpinning elements of effective protected and conserved areas (Stoll-Kleeman et al., 2006; de Koning et al., 2016; Eklund & Cabeza, 2017). This chapter briefly reviews the diversity of legislative approaches and customary laws used to establish and manage protected and conserved areas across Oceania. The chapter then considers the broader issue of governance across the region with a particular focus on equity. The word 'equity' captures the notion of fairness, and enhancing this not only contributes to more successful biodiversity conservation (Oldekop et al., 2016), but also increases the contribution of protected and conserved areas to human well-being (Franks et al., 2018; Gurney et al., 2021).

As a new decade starts, it is timely to reflect on the progress of the Aichi Targets of the Convention on Biological Diversity (CBD), particularly Target 11. This target relates to the achievement of conservation "through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures". These areas should also be "integrated into the wider landscapes and seascapes" (see Section 1.2). From a regional point of view, the draft Pacific Islands Framework for Nature Conservation and Protected Areas 2021–2025 articulates the concept of equity by highlighting the need for conservation in the region to be inclusive, participatory, accountable, transparent and equitable (Principle Five).

Equitable management in nature conservation is foremost about governance (Franks et al., 2018). By examining area-based conservation through this lens, key and complex issues related to equity can be understood and analysed. The term 'governance' refers specifically to decision-making and the "interactions among structures, processes and traditions that determine how power and responsibilities are exercised, how decisions are taken and how citizens and other stakeholders have their say" (Borrini-Feyerabend et al., 2013). Management is about the activities that are carried out to reach certain objectives. In contrast, governance is concerned with who makes the decisions to implement those activities, how those decisions were reached and who remains responsible for their implementation.

We will synthesise the main theoretical issues connected to governance, firstly by considering governance in the two interrelated dimensions of diversity and quality. These can provide a measure of how well protected and conserved areas are being governed and the likelihood of achieving conservation and social outcomes. Diversity refers to the broad spectrum of actors who might be recognised as decision-makers, ranging from state level actors to local community leaders. Having the full spectrum of governance arrangements recognised within legal and policy frameworks provides the best opportunity for area-based conservation to be contextually and culturally appropriate (Ostrom, 1990). This is particularly relevant for Oceania where these areas can vary from large-scale marine protected areas (MPAs) to small community conservation areas on customary lands.

Kilaka Forest, Fiji (© Sahar Kirmani)

At the site level, evaluating governance quality can inform the extent to which decision-making incorporates the principles of good governance (Borrini-Feyerabend et al., 2013). As governance is always rooted in a socio-economic, political and legislative context, we will also describe the supportive legal frameworks, in a region where traditional and modern systems often work in tandem. Governance arrangements are typically defined by legal frameworks at the national and/or subnational level. In the Oceania context, these arrangements are often complemented by customary law at a local level. The supportive legal framework for effective nature conservation will also be described. The chapter will close by identifying key trends in the region and note a brief set of recommendations to enhance governance, and therefore achieve effective conservation outcomes, in the region.

It should be noted that there are contextual factors that affect the way in which governance diversity and quality should be examined in Oceania. First, the region has both independent states and overseas territories, which have been granted varying levels of autonomy. This has implications for the way in which laws and statutes are drafted and ratified. Second, the level of economic development varies greatly. Some countries are classified as least developed while others are highly developed (Figure 1.1). This economic position influences national priorities and the capacity of a country to provide services to its population. It also impacts the resources available for area-based conservation measures.

3.2 The role of law in effective protected and conserved areas

Protected and conserved areas are more secure and successful if they have legal frameworks that provide for fair and effective governance and management. Typically, protected area legislation sets out the designation process, mandates management authorities, regulates activities and penalties for offences and formalises the role of rightsholders and stakeholders.

Most countries in Oceania, except for the Kingdom of Tonga, were under the governance of colonial metropoles notably the United Kingdom, France, United States of America, Australia and New Zealand. Most countries have since become independent except for American Samoa, Guam, Northern Mariana Islands, Pitcairn Islands, Tokelau, French Polynesia, New Caledonia and Wallis and Futuna. Independent countries have written constitutions, which provide a legal framework that promotes self-governance. The transition from colony to independent state often saw the adoption of pre-existing legal frameworks developed with Western worldviews.

Law reforms have removed some archaic legislation, but many older laws still exist. In some countries, these include legislation relating to protected areas and the environment in general. For example, in Fiji, while the *Offshore Fisheries Management Decree*, passed in 2012, replaces many regulations of the Fisheries Act 1942, there was never any complementary decree or act passed to update management of inshore waters. Thus, provisions of the Fisheries Act still grant ownership of the seabed and overlying resources within customary fishing grounds to the state (Clarke & Jupiter, 2010). There is no pathway in Fiji for national recognition of customary rules within community fisheries management plans. By contrast, Solomon Islands created such a pathway through its updated *Fisheries Management Act 2015.*

3.2.1 SOURCES OF LAW

Protected and conserved area legislation across the region is diverse. Some countries have general legislation that establishes systems of protected areas. For instance, the *Solomon Islands Protected Areas Act 2010* provides for the declaration and management of protected areas to conserve biological diversity and to promote related research. It establishes a system of protected "areas where special measures need to be taken to conserve biological diversity" and the management of those areas. The Act is also concerned with promoting environmentally sound and sustainable development in areas adjacent to protected areas to enhance protection of the protected areas. The *Protected Areas Regulations 2012* prescribe the categories of protected areas, which include nature reserves, national parks, natural monuments, resource management areas, closed areas and World Heritage sites. These correlate with the IUCN system of protected area management categories.

Other countries have developed site specific legislation that establishes a regulatory framework to specifically manage and protect an identified site. For instance, New Caledonia has a decree to protect the Natural Park of the Coral Sea; an area of 1.3 million km^2 and one of the largest protected areas in the world. Similarly, the *Cook Islands Marae Moana Act* designates its entire Exclusive Economic Zone (EEZ) as a multiple use MPA. The *Northern Mariana Islands' Mañagaha Marine Conservation Act 2000* is site-specific legislation that regulates the management of the Mañagaha Marine Conservation Area.

Most countries have opted for overarching environmental legislation that promotes the general conservation of natural resources and can be used by countries to establish protected areas. For instance, the *Kiribati Environment Act 1999* was amended in 2007 to define protected areas and established an official list of protected areas.

Protected areas in Kiribati may be prescribed by regulation, and may be categorised according to international or national standards. The Phoenix Islands Protected Area (PIPA), which is established by a regulation under the Act, recognises the IUCN protected areas categories as a management tool for the area. In other cases, countries enable protected areas through adjacent sectoral legislation such as forestry and fisheries legislation. For instance, Fiji's Offshore Fisheries Management Decree 2012 allows for designation of MPAs.

Customary laws are common in Oceania. The constitutions of most of the countries in the region make express provision for the recognition of custom or customary law in the determination of customary land ownership (NZLC, 2006). This plays a critical role in the management, protection and conservation of the region's biodiversity, given a large percentage of land is owned by customary landowners (Techera, 2015).

Research and experience show that community conserved or managed areas are usually set up informally by the communities themselves to address biodiversity loss or environmental degradation in their local areas. Across the region, community conservation areas and Locally-Managed Marine Areas (LMMAs; Box 1.4) are governed based on customary or traditional practices. While community managed areas in some countries continue to be managed without the support of national legislation, some countries recognise customary law under statutory law. For example, in Tonga the *Fisheries Management Act 2002* enables the development of Special Management Areas, which provide national recognition of local exclusive access rights for fishing (Smallhorn-West et al., 2020). In Vanuatu, the *Environment Protection and Conservation Act 2002* allows customary-owned land to be administered and managed as a designated Community Conservation Area provided that customary landowners play a vital role in its management. In the Cook Islands, the 2016–2020 Moana Policy recognises the *Ra'ui* system[11] which is managed by the community and encourages Cook Islands traditional knowledge and practices around marine custodianship including *ra'ui* and *ra'ui mutukore*. Customary owners are encouraged to participate in the protection of the Cook Islands *Marae Moana* or EEZ under the *Marae Moana Act 2017.*

Other options exist for the formal recognition of local rules for management through other legal approaches. In Papua New Guinea, conservation organisations have recently begun using conservation deeds, a contract law mechanism, to enable legal formalisation of customary practice as it relates to biodiversity conservation and environmental management. Conservation deeds connect custom and formal law by providing a mechanism built on Papua New Guinea's constitutional recognition of custom and the common law right of private property owners to enter into private contracts (Dom, 2019). In Fiji, important forest areas, such as Sovi Basin and Kilaka, have been secured through conservation leases between conservation organisations and landowners, brokered by the *iTaukei* (indigenous) Land Trust Board (Mangubhai & Lumelume, 2019).

Conservation leases provide for financial flow to landowners based on the value of the timber and rent for the land, in this case for protection, and are typically associated with locally endorsed management plans inclusive of local rules that apply within the conservation areas.

Overall, most countries within the Oceania region have protected area legislation or enabling legislation that allows the creation of a protected area system. A number of countries' protected areas systems have adapted the IUCN protected areas categories to suit their context, namely: Solomon Islands within the *Protected Areas Act Regulations 2012;* Fiji within the *National Trust of Fiji Act 1970*; and American Samoa with the *Parks and Recreation Code.*

Some territories within Oceania have autonomy to enact legislation in conjunction with the controlling country's legislation and policies applied to the territories. The American Territories have locally specific protected area legislation but are also subject to Federal law, such as the *Executive*

[11] A form of customary management involving temporary or permanent closure of designated areas to the harvesting of key species.

Order 13158 on Marine Protected Areas under the *National Marine Sanctuaries Act (16 U.S.C. 1431 et seq.).* The Order defines an MPA as "any area of the marine environment that has been reserved by Federal, State, territorial, tribal or local laws or regulations to provide lasting protection for part or all of the natural and cultural resources therein". It recognises areas reserved by the local governments of each territory. MPA establishment, protection and management is the responsibility of Federal agencies whose authorities provide for the establishment or management of MPAs. With MPAs established at territory level, the Executive Order requires the Department of Commerce and the Department of the Interior to consult with those States to promote coordination among Federal, State, Commonwealth, territorial and tribal actions to establish and manage MPAs.

The National Oceanic and Atmospheric Administration (NOAA) developed an MPA framework in accordance with the Executive Order, which describes the national system and how sites are nominated. American Samoa has a total of four national sites and 11 local MPAs. In contrast, Pitcairn Islands, a territory of the United Kingdom, has specific legislation that deals with MPAs. The

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2016 MPA Ordinance establishes the Pitcairn Islands Marine Protected Area comprising the EEZ and the territorial seas of Pitcairn, Henderson, Ducie and Oeno Islands. The French territories have a similar approach to the USA. French laws and policies on protected areas are applied within the French territories of Oceania.

Despite progress in many places, there are still some gaps. While countries in Oceania continue to work towards law reform to align with their commitments under the CBD and the Programme of Work on Protected Areas (PoWPA), protected areas legislation or related legislation continue to use laws which may not create the enabling legal frameworks needed for effective and equitable protected areas as set out in PoWPA. Undoubtedly, there are gaps across the region which are being brought to light through various legal reviews. For example, a number of countries within Oceania (e.g. Fiji, Samoa, Solomon Islands, Tonga and Vanuatu) are working towards the development of national marine spatial plans, inclusive of networks of MPAs, and in support of this, the IUCN has commissioned legal reviews (e.g. Muldoon et al., 2015) to assess if current legal and policy frameworks are sufficient.

3.2.2 GENERIC ELEMENTS OF EFFECTIVE PROTECTED AND CONSERVED AREA LEGISLATION

IUCN has produced a guide on the essential elements to incorporate into protected area legislation (Lausche, 2011), which is adapted for the Oceania context in Table 3.1. Importantly, the elements should be seen as a starting point, which each jurisdiction can adapt to local context. Most legislation in Oceania, and especially those that were enacted in the past decade, incorporate the majority of these elements. In some cases, these are described in subordinate regulations, such as in Kiribati. In other examples, such as from the Cook Islands, legislation adopting these principles is promulgated for a single protected area (Box 3.1).

TABLE 3.1 Elements of protected area legislation

Element	Explanation
Objectives and jurisdictional scope	The objectives and purpose of legislation should be clearly defined. These can be broader than nature conservation and may include the maintenance of cultural objects, structures and sites, protecting scenic beauty, facilitating recreation, tourism, research, education, supporting rural development and sustainable use of buffer zones, maintaining watersheds and controlling erosion and sedimentation. The jurisdictional and/or geographical scope of the statute should be clear and consistent with other laws that pertain to natural resources (including cross-sectorial).
Recognition and empowerment of customary owners	Customary ownership exists over much of the land and coastal waters of the Oceania region. Area-based conservation legislation should empower these ownership rights and provide flexible governance frameworks to allow for community-based or co-management arrangements.
Definition and management categories	Having a clear definition provides certainty on the purpose of protected areas. Aligning this with broader accepted definitions, such as from the Convention on Biological Diversity (CBD) or IUCN will make it easier for state parties to report on international obligations. The CBD sets out in its Article 2 the definition of a protected area as "a geographically defined area, which is designated or regulated and managed to achieve specific conservation objectives". The IUCN definition goes beyond this, defining a protected area as "a clearly defined geographical space recognised, dedicated and managed, through legal and other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values" (Dudley, 2008). There are usually a range of protected area management categories to accommodate different levels of required protection and other contextual factors. IUCN defines protected area categories ranging from strict nature reserve to protected area with sustainable use of natural resources (see Table 1.1).
Design principles and procedure for establishing protected areas	Outlining design principles and procedures for establishing protected areas facilitates effective and equitable management regimes. Potential principles that should be considered by policymakers include: respecting, empowering and gaining the agreement of customary owners; conservation of priority habitats and species; land and seascape system planning (connectivity and buffers); mitigation of social and environmental impacts; precautionary approaches; and incorporation of climate change risk reduction and adaptation measures. Key procedural considerations may include: powers of establishment and recognition; nomination processes; criteria and research requirements; incorporating local and traditional knowledge; consultation and consent processes; use of protected area categories; demarcation of boundaries and zones; and powers and procedures for reduction or declassification.
Governance principles and institutional arrangements	Legislation should ensure that the principles of good governance are incorporated into protected area frameworks. For example, legislation should: ▪ Provide for a diversity of governance types appropriate to the jurisdiction (including the recognition of legal pluralism in relation to customary governance) ▪ Empower customary owners and communities to sustainably manage their resources ▪ Consider good governance principles such as fairness, rights, legitimacy, voice, accountability, transparency and vitality. ▪ It is also important to define the institutional arrangements and responsibilities for managing protected areas.
Process of planning and adaptive management	Typically, protected area legislation outlines requirements for preparing management plans and the review process. Plans should set out activities to ensure that a site's values are conserved in accordance with its management objectives. Monitoring and adaptive management should be incorporated in the management planning and implementation process.
Regulating activities and compliance	Regulating activities within protected areas is important for ensuring use is in accordance with the site's objectives. Legislation and associated regulations should provide the regulatory basis for conducting compliance. This should include identifying enforcement processes (e.g. delegated authority), penalties and grievance mechanisms.
Sustainable financing	There is a widespread shortfall in protected area funding in the Oceania region (see Chapter 7). Incorporating sustainable financing and business planning within legislative frameworks can allow management authorities to more easily raise revenue to support management. Options may include user fees, conservation trust funds and payment for ecosystem service schemes (see Section 7.3).

Source: Adapted from Lausche (2011)

BOX 3.1 MARAE MOANA ACT 2017, COOK ISLANDS

Objective and jurisdictional scope. The primary purpose of the legislation is to protect and conserve the ecological, biodiversity and heritage values of the Cook Islands marine environment. In doing so, it creates one of the largest MPAs in the world by designating a multiple use marine protected area within its EEZ or Marae Moana. It also attempts to ensure that the Cook Islands will continue to use its marine resources and the maritime environment while conserving biological diversity and achieve commitments made under the United Nations Common Database (UNCDB), United Nations Convention on the Law of the Sea and the United Nations World Heritage Convention. In addition, the legislation specifically identifies which activities it would apply to and to whom.

Recognition and empowerment of customary owners. The Act recognises and encourages Cook Islands traditional knowledge and practices around marine custodianship including locally recognised customary systems of *ra'ui* and *ra'ui mutukore*. It encourages the engagement of the House of Ariki and the Koutu Nui, tribal councils in the Cook Islands, in the protection and management of the marine environment.

Definition and management categories. The Act designated Cook Islands' entire EEZ as a multi-use marine protected area. In Section 8, the Act specifically defines that Marae Moana includes the waters, seabed, subsoil (to 1,000 m below the seabed) and airspace (to 1,000 m above sea level) within the internal waters, territorial sea and EEZ boundaries. Section 24 establishes an MPA within the EEZ or Marae Moana to be an area of 50 nautical miles (measured from each coastline and as shown in Schedule 1 of the Act) around all islands of the Cook Islands. It further provides that the Marae Moana is established as an area that must be managed for the purposes of the Act and in accordance with principles that are set out in Section 5 of the Act. Marine zones are clearly specified in the Act and include a general use zone, restricted commercial fishing zone, seabed minerals activity buffer zone, island protection zone, ocean habitat preservation zone, and national marine park zone. The Act also allows for regulations to be prescribed to create additional zones through the required marine spatial planning process.

Governance principles and institutional arrangements. The Act recognises the participation of Cook Islands House of Ariki and the Koutu Nou, and it also encourages customary and traditional marine managed area practices by the customary owners. The Act establishes the Marae Moana Council, Technical Advisory Group and Marae Moana Coordination Office, who work towards achieving the objective and purposes of the Act.

Design principles and procedure for establishing protected areas. The Act requires the Marae Moana to be managed in accordance with nine principles provided under Section 5 that meet the core elements of effective nature conservation legislation. The principles include: Protection, conservation and restoration; Sustainable use to maximise benefits; the Precautionary Principle; Community participation; Transparency and accountability; Integrated management; Investigation and research; Ecosystem-based management; and Sustainable financing. The Act requires a marine spatial planning exercise to be undertaken to promote the purposes of this Act by delineating zones within the Marae Moana and specifying the permitted and restricted activities within each zone.

Process of planning and adaptive management. The Act provides for the development of marine spatial plans, both a national Marae Moana spatial plan and an island marine spatial plan to support the achievement of the purpose of the Act. The Technical Advisory Group is responsible for preparing the national Marae Moana spatial plan.

Regulating activities and compliance. There is a compliance provision in the Act that ensures notification of the national Marae Moana spatial plans to the different agencies and the agencies are required to implement the measures identified.

Sustainable financing. There is no provision for the development of a sustainable funding mechanism for the MPA created within the EEZ or Marae Moana, but there is provision for the Technical Advisory Group to "take necessary measures to secure national and international sources of finance to support the purposes of this Act".

Marae Moana (© Conservation International)

3.3 Governance types

The IUCN recognises four broad governance types (Table 3.2), which between them represent a full spectrum of governance diversity (CBD, 2004; Borrini-Feyerabend et al., 2013). Importantly, they can serve as a guide to understanding the status and appropriateness of governance arrangements.

Types A and B are generally established by government agencies alone or in partnership with others. Types C and D may or may not have government support for management. IUCN governance Type D is particularly relevant to the Oceania region. This refers to various forms of community conservation areas, including "territories and areas voluntarily conserved by indigenous peoples and local communities (ICCAs)" or "territories of life", where a close association or bond is found between a specific indigenous people or local community and a territory, area or body of natural resources (Borrini-Feyerabend et al., 2013). When such an association is combined with effective local governance and the long-term conservation of nature, these can be referred to as ICCAs. ICCAs are recognised in the CBD and many other international agreements. Importantly, these areas may be counted towards national targets under Aichi Target 11 as a protected area or under the provisions for "other effective conservation measures" (OECMs) (see Section 1.2.2). This should be done with the knowledge and consent of custodian communities.

TABLE 3.2 IUCN governance types for protected and conserved areas

Governance Type	Sub-types
Type A: Governance by government	National Ministry or a protected area agency Subnational agency (at all levels)
Type B: Shared governance by diverse rightsholders and stakeholders together	Transboundary governance arrangements Joint or collaborative governance bodies
Type C: Governance by private entities	Individual landowners Religious entities Non-profit or for-profit organisations
Type D: Governance by indigenous peoples and/or local communities, (often called ICCAs or territories of life)	Indigenous peoples' conserved territories and areas – established and run by indigenous peoples Community conserved areas – established and run by local communities

Source: Borrini-Feyerabend et al. (2013)

3.4 Governance diversity in Oceania

Starting in the 1990s, concerted efforts were made in Oceania to build on local and customary rights, and to revive indigenous stewardship to develop models of conservation that combined sustainable use aspirations with biodiversity conservation outcomes (Johannes, 2002; Govan et al., 2009). This has led to many community-based and collaboratively managed areas across the region. The World Database on Protected Areas (WDPA) illustrates the status of governance arrangements in the region (UNEP-WCMC & IUCN, 2021a, see Box 2.1). This data highlights that Oceania has the highest proportion of community-based protected areas (Type D) anywhere on the planet, making up 37.5% of all sites in the region (Figure 3.1). The Latin America and Caribbean region has the next highest level with 7.4% (UNEP-WCMC & IUCN, 2021b). More significantly, Oceania has nearly a quarter of all community-based and indigenous protected areas reported on the WDPA. The region also has the highest level of protected areas with shared governance (9.4%).

There is also a notable trend in governance between the independent states and overseas territories. The former have a comparatively high level of community-based (47.6%) and a low level of government managed protected areas (13.4%). In contrast, the overseas territories only have one community-based protected area and a comparatively high level of government managed sites (77.5%). Across the countries in the region, Papua New Guinea, Fiji, Tuvalu and Republic of the Marshall Islands (RMI) have the highest levels of community managed protected areas (>60%) (Figure 3.2).

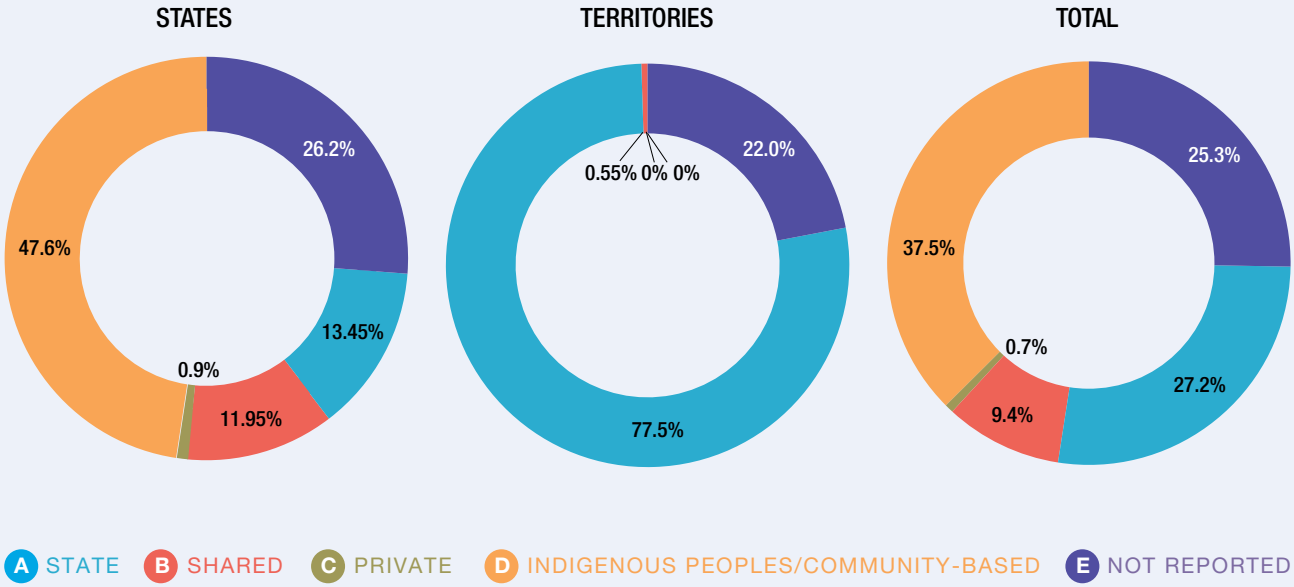

FIGURE 3.1 Protected and conserved area governance types in Oceania (percentage of protected area number). *Source: Compiled using data from UNEP-WCMC and IUCN (2021a)*

3.4.1 GOVERNMENT

In Oceania, 27.2% of protected and conserved areas are governed by national and sub-national governments. This contrasts with the global situation, where the figure is over 80%. Nonetheless, government-declared and managed protected areas make up the greatest proportion of spatial coverage in the marine realm (41.5%) – which is due to a number of government-run large-scale marine protected areas (LSMPAs). The issues of tenure and ownership associated with nearshore marine areas do not necessarily apply to offshore ocean spaces within EEZ, making it comparatively easier for national governments to declare vast areas. The extent to which the establishment and management of these areas have involved an appropriate level of community and stakeholder participation is mixed (Govan, 2017; Friedlander, 2018; Mallin et al., 2019). Given the wide variety of potential benefits of LSMPAs, governance assessments can be an important mechanism for improving equity and community support (O'Leary et al., 2018; Stevenson et al., 2019).

3.4.2 SHARED GOVERNANCE (JOINT OR COLLABORATIVE)

Across the protected areas reported in Oceania, 9.4% have a shared governance arrangement, which is substantially higher than the global average. Importantly, these areas have their origins in customary ownership arrangements, which have been in existence for millennia. Governments and other parties, such as non-government organisations, often partner and support local communities to manage their natural resources. The Yopno Uruwa Som (YUS) Conservation Area of Papua New Guinea is an example of where local, national and international institutions collaborate to support customary owners to manage their natural resources (see Box 3.2). In Fiji, a large number of marine conservation agreements have been developed, often through arrangements between tourism operators and local communities, sometimes brokered by NGOs. Tourism-associated marine conservation agreements in Fiji cover an estimated 266.25 km^2, including the two largest community-managed MPAs in the country (Namena Marine Reserve and Vatu-i-Ra Conservation Park). Only 9% of the Fiji marine conservation agreements are supported by law; the rest operate under verbal or written agreements (Sykes et al., 2018).

Vatu-i-Ra Conservation Park Management Committee, Fiji (© WCS)

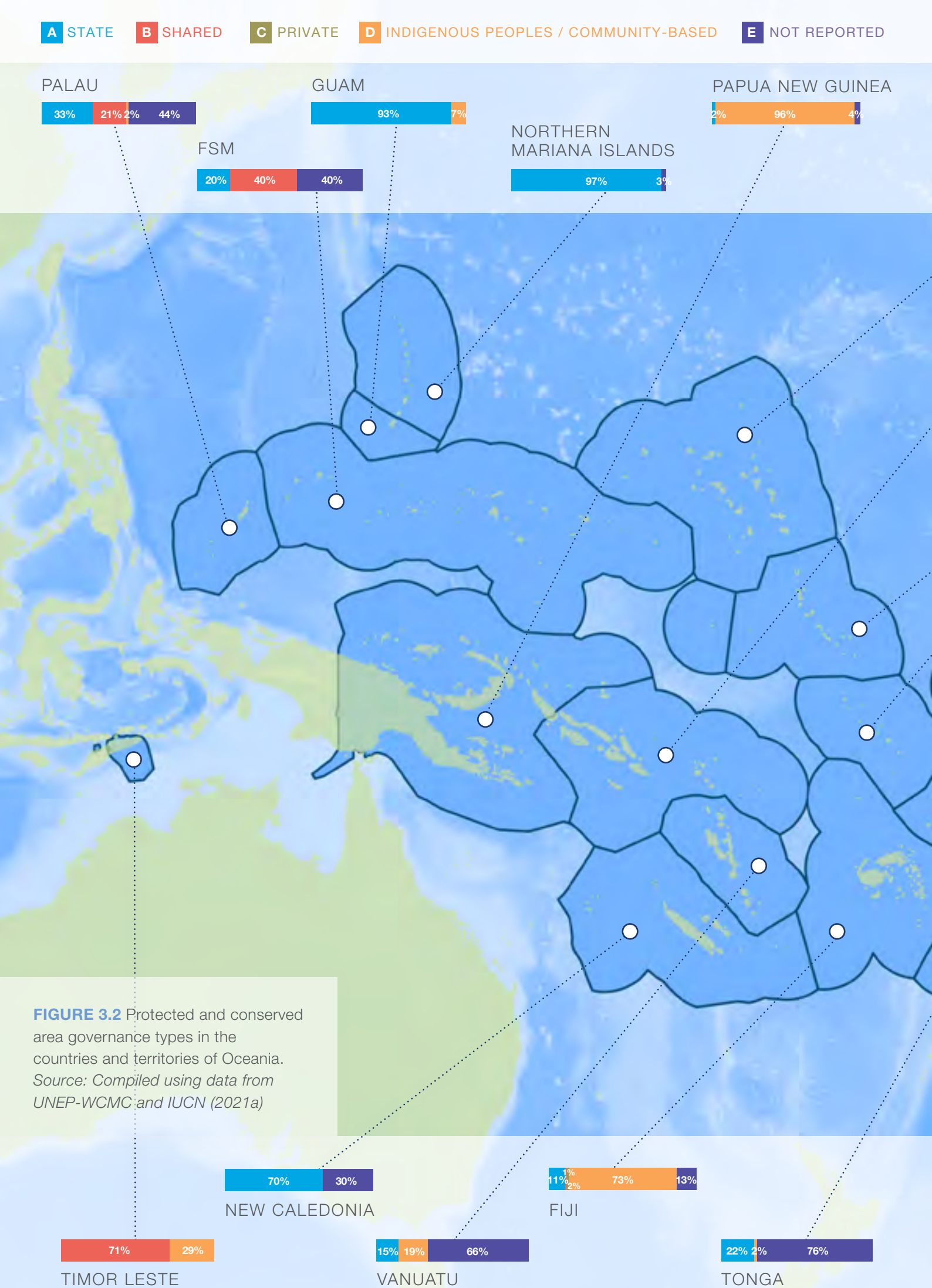

FIGURE 3.2 Protected and conserved area governance types in the countries and territories of Oceania. *Source: Compiled using data from UNEP-WCMC and IUCN (2021a)*


SOLOMON ISLANDS
1%
1%
59%
38%
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COOK ISLANDS
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MARSHALL ISLANDS
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WALLIS-FUTUNA
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SAMOA
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AMERICAN SAMOA
40%
60%
FRENCH POLYNESIA
17%
83%
NIUE
100%
TOKELAU
50%
50%
PITCAIRN ISLANDS

BOX 3.2 YUS CONSERVATION AREA – EMPOWERING COMMUNITIES IN PNG

Nicholas Wari (Former Research and Conservation Coordinator, PNG Tree Kangaroo Conservation Program)

Indigenous Papua New Guinean people have a deep connection with their natural resources – respecting their rights is fundamental for conservation initiatives in the country. YUS is truly an example of how customary owners govern and sustainably manage their natural resources in the Oceania region, while balancing socio-economic development needs. Located on the Huon Peninsula, this 766 km^2 protected area extends from the coast in the north to the 4,000 m high peaks of the Saruwaged Range in the south – encompassing a range of habitats, farming lands and more than 50 villages. It is home to numerous globally significant species, including the Endangered Matschie's Tree Kangaroo (*Dendrolagus matschiei*).

The journey to create the YUS Conservation Area started some 20 years ago, when local landholders and scientists from the Woodland Park Zoo in Seattle committed to work together on conserving the area's extraordinary biodiversity. This led to the creation of the Tree Kangaroo Conservation Program (TKCP), which is an umbrella partnership between the Zoo and TKCP-PNG, a local NGO. Over time, more and more landholders pledged their lands, which culminated in the establishment of YUS as the country's first nationally gazetted Conservation Area in 2009. Importantly, the lands comprising the Conservation Area are owned by the local people – who now receive support from the PNG government and TKCP-PNG. These landholders have endorsed the landscape plan and zoning bylaws. Infringements against these laws are referred to the landholders, who may then choose to pursue action through the village court system.

The YUS Conservation Area Management Committee represents a shared decision-making structure, and can be identified as IUCN governance type B, where decision-making is shared by diverse rightsholders and stakeholders together. This is a unique approach to shared governance, combining the state gazettal of the

Gogiok Village, YUS Landscape (© Paul van Nimwegen)

Conservation Area but maintaining the governance, ownership and interests of the customary landowners. The Management Committee is comprised of:

- Landowner representatives from the YUS Community-based Organisation;
- Government at various levels: Local, District and Provincial;
- The Conservation and Environment Protection Authority (CEPA); and
- The Tree Kangaroo Conservation Program

The process of decision-making in YUS is a mix of both customary and modern approaches – through chieftainships and democracy. The YUS Community-based Organisation (YUS-CBO) is the 'voice of YUS', representing communities in decision-making for the Conservation Area. The organisation is comprised of elected representatives from the Conservation Area's four administrative zones (Yopno, Uruwa, Som and Nambis). These representatives elect the YUS-CBO executives, who participate in the Conservation Area Management Committee. Decisions concerning customary lands require the consent of the landholders. Decisions at the community level are typically discussed at clan meetings in a '*Hausman*', an institution for decision-making, and focus on building consensus. The clan leader and members will then hold an open forum to consult with the broader community, ensuring decisions reflect the interests of everyone (including women and youth). The pluralistic nature of decision-making and the inclusion of rightsholders and stakeholders will ensure YUS is well governed into the future.

This model has proved very successful. In the 2016 nationwide assessment of protected area effectiveness, YUS received the highest score. TKCP has also been the recipient of numerous international awards such as the United Nations Equator Prize (1994) and Whitley Award (2016).

3.4.3 PRIVATELY PROTECTED AREAS

Privately protected and conserved areas are the least common form of governance within the region (less than 1%). This is largely the result of the high level of customary ownership and limited freehold land, as well as the global challenge of poor reporting of private conservation to the WDPA (Bingham et al., 2021). In addition, most countries do not have any legal and formal definition for privately protected areas (PPAs). PPAs and privately managed OECMs can be created through lease arrangements from customary communities with third-parties for tourism enterprises or other purposes, but can also be set up on private lands, research sites, sites owned by religious entities, companies and NGOs (Mitchell et al., 2018). Notable examples include the Malololelei Recreation Reserve in Samoa (see Box 3.3), the Upper Navua Conservation Area and Sovi Basin Protected Area in Fiji (Ahmed, 2019) and the Edenhope Nature Preserve on Santo Island of Vanuatu.

BOX 3.3 MALOLOLELEI RECREATION RESERVE

Manumea
(*Didunculus strigirostris*)
(© Dr Ulf Beichle)

Malololelei Recreation Reserve is located about 7 km from Apia, the capital of Samoa (central Upolu Island). In 2010, an area of 12 ha was bought by Bluebird Lumber and Hardware Ltd (BBL) from the Catholic Church through their Land Board. Five years later this area was declared as a reserve as part of a partnership with the Ministry of Natural Resources and Environment (MNRE). Two highly threatened and endemic birds are present in the reserve, the ma'o or Giant Forest Honeyeater (*Gymnomyza samoensis*) and the manumea or Tooth-Billed Pigeon (*Didunculus strigirostris*). BBL's efforts have been motivated by a desire to increase resilience and sustainable management of the site and support native wildlife conservation. The partnership has resulted in biodiversity assessments being conducted and the implementation of an invasive species control programme to safeguard the site's significant species.

Source: Adapted from Mitchell et al. (2018, pp. 78–79)

3.4.4 COMMUNITY CONSERVED AREAS

Community-based protected and conserved areas initiatives fall under a wide variety of names in the region (Govan et al., 2009). The vast majority of these have their roots in local government arrangements based on customary ownership. The level to which customary ownership is recognised in each country and territory depends on the national legal framework, which is largely a historical legacy. Some countries explicitly recognise tenure and access rights, while others have more hybrid arrangements. The WDPA reports that 39% (53% for the independent states) of protected and conserved areas in the region have a community-based governance arrangement. However, the actual figure may in fact be much higher. In Vanuatu, for example, the National Biodiversity Strategy and Action Plan identifies 350 informal community conservation areas not recognised by the Department of Environment and Conservation. Brewer et al. (2021), working with data from Solomon Islands' Village Resource Survey, found that of 1,168 villages that responded, 34% imposed temporary spatial closures, 23% imposed species restrictions and 19% gear restrictions on fishing activities. These figures are 2–3 times higher than a contemporary inventory of supported conservation sites (Govan et al., 2009).

These areas have a variety of rules and management strategies, ranging from permanent closure of use over a whole area to periodic no-take from specific designs. These are often modelled on traditional approaches known generically as 'taboo' but locally known by many names such as *tapu, tabu, ra'ui, rahui, kapu, mo, bul, sa* or *lafu* amongst others (Govan et al., 2009). These cultural beliefs affect resource allocation and access rights, and environmental stewardship is intrinsic to these property rights regimes (Ruddle et al., 1992; Hviding, 1996; Berkes, 2004). The characteristic of the taboo is its fluidity and dynamism. Sometimes the taboos may cover the whole of a community managed area, but in many other cases the taboo may be just one tool applied in one part of the managed area or at a particular time, while management of the whole area is undertaken using other tools, including the restrictions on access imposed by customary tenure (Foale et al., 2011). Customary tenure has long been highlighted as the primary component and enabling condition of indigenous conservation efforts and the basis for future resource management efforts in Oceania (Johannes, 1978). These systems of rights allow local rights-holding communities to exclude and regulate outsiders who wish to access resources, and provide the basis for exerting management rules such as bans on particular harvest practices or excluding people from part of the managed area. Such bans were traditionally used for different cultural reasons including mourning and not necessarily for resource management (Foale et al., 2011).

Despite their relatively high number, community-based approaches do have some challenges in the region. In most cases, communities tend to have rights and management responsibilities over relatively small areas, which limits their ability to set aside larger areas for the purposes of biodiversity conservation. There are, of course, some notable exceptions to this, such as the YUS Conservation Area, where arrangements have been negotiated with a number of clan groups to establish a larger protected area (Box 3.2) and some larger Locally-Managed Marine Areas in Fiji (e.g. Vatu-i-Ra Conservation Park). The use of temporal spatial closures can have reduced biodiversity outcomes compared to permanent no-take areas, depending on the frequency with which they are opened and the intensity of harvesting (see e.g. Jupiter et al., 2017; Goetze et al., 2016). Nevertheless, working with and supporting rightsholders and communities to sustainably manage their resources through approaches such as protected and conserved areas provides the greatest opportunity to equitably and effectively safeguard the full spectrum of biodiversity in the region. The gap between community level action and national level approaches should be bridged, to incentivise and empower the resource stewards able to make a difference (Box 3.4).

Declaration ceremony (Tara Bandu) of a community based MPA, Timor-Leste (© Conservation International)

BOX 3.4 THE YAWETUT NATURE RESERVE

Danny Nef, ETH Zuerich and Cecil Haward Vaqyeqe, Chief of Yawetut

The Yawetut Nature Reserve is a success story of community conservation in Vanuatu, and is characterised by Type D governance. Thanks to the reserve, not only has unique biodiversity been conserved, but also the ecosystem's function as a food safety net, for example when agricultural production fails due to climatic stress factors. Established 60 years ago, the reserve extends over 400 hectares of the southern part of Hiw, the northernmost island of Vanuatu. It includes both terrestrial and aquatic habitats and extends from the coast almost to the top of the 366 m high peak Wonvagre. The lowland rainforest and the reef are home to numerous species, including the Coconut Crab (*Birgus latro*) and Vanuatu Scrubfowl (*Megapodius layardi*).

The successful protection of biodiversity is rooted in the local governance system which is based on voluntary but strict protection regulations. Only in exceptional situations, the ban is lifted and people are allowed to enter the area to gather resources. Such a situation may arise, for example, due to a shortage of food caused by severe weather. Infringements of regulations and disputes are referred to the customary landowners, who then choose the appropriate approach to resolve a case within the framework of customary laws and governance.

However, this framework, which is based on and legitimised by kinship and status, is increasingly challenged by socio-economic changes. As a consequence, decisions and rules are more often questioned or criticised and, in some cases, no longer respected at all. This becomes particularly evident when new economic incentives arise that encourage the commoditisation of natural resources such as timber or fish. It is likely that the pressure on the conservation area and its resources will increase in the course of the advancing economisation of traditional societies in Vanuatu. The question therefore arises as to how nature conservation can be legitimised anew in a rapidly changing socio-economic environment so that it continues to be accepted and supported. The greatest challenge here is to incorporate the different social values and norms as well as diverging aspirations equally. Hence, existing traditionally anchored management practices need to adapt to the new realities. This is a potentially painful process because power may need to be redistributed and norms and values renegotiated.

A possible way to support this process is to register the Yawetut Nature Reserve on the national environment register as an official Community Conservation Area (CCA) under the *Environmental Protection and Conservation Act*. Registration not only brings publicity and new marketing opportunities, but also access to information and methods relevant for conservation management as well as access to various types of government assistance. However, the registration process also involves obstacles that are difficult if not impossible for remote communities like Yawetut to overcome. First and foremost, landowners in remote communities are simply not aware of the possibility of registration, as they often do not have the necessary resources to access relevant information or contacts. The registration process is not supported by financial or technical support. In addition, it can be difficult for communities to meet the requirements for registration, such as developing a management plan. Registration on the community's own initiative therefore seems to be rather unlikely unless technical and financial resources are made available to support potential CCAs. Yawetut has recognised the challenges that socio-economic change poses for its conservation area and with it the need to adapt to new realities. However, for this transformation to succeed, Yawetut needs support from outside the community.

3.5 Governance quality

Understanding governance diversity is one part of the picture. It is critical to note that there is no universal or 'best' governance arrangement in any given context. It is more realistic to examine how appropriate, legitimate and useful these arrangements are in different circumstances. A governance arrangement for a given area can only be considered as *appropriate* when it is tailored to its historical and social context, and is effective in delivering lasting conservation results and social benefits. Part of the consideration of effectiveness, is to understand how equitable the governance is. With this, we begin to build a sense of governance quality, at times referred to as good governance, drawing on the principles for good governance summarised in Table 3.3.

TABLE 3.3 IUCN principles of good governance for protected areas

Principles	A selection of considerations related to the principles
Legitimacy and voice	"Enjoying broad acceptance and appreciation in society; ensuring procedural rights of access to information, participation and justice; fostering engagement and diversity; preventing discrimination; fostering subsidiarity, mutual respect, dialogue, consensus and agreed rules…"
Direction	"following an inspiring and consistent strategic vision grounded on agreed values and an appreciation of complexities; ensuring consistency with policy and practice at various levels; ensuring clear answers to contentious questions; ensuring proper adaptive management and favouring the emergence of champions and tested innovations…"
Performance	"Achieving conservation and other objectives as planned; promoting a culture of learning; engaging in advocacy and outreach; being responsive to the needs of rightsholders and stakeholders; ensuring resources and capacities and their efficient use; promoting sustainability and resilience…"
Accountability	"Upholding integrity and commitment; ensuring appropriate access to information and transparency, including for lines of responsibility, allocation of resources, and evaluation of performances; establishing communication avenues and encouraging feed-back and independent overseeing…"
Fairness and rights	"striving towards equitably shared costs and benefits, without adverse impact for vulnerable people; upholding decency and the dignity of all; being fair, impartial, consistent, non-discriminatory, respectful of procedural rights as well as substantive rights, individual and collective human rights, gender equity and the rights of indigenous peoples, including Free, Prior and Informed Consent; promoting local empowerment in conservation…"

Source: Adapted from Borrini-Feyerabend et al. (2013)

Papuan Hornbill (*Rhyticeros plicatus*), which inhabits Solomon Islands and Papua New Guinea (© Ger Bosma via Getty Images)

The good governance principles ensure rights-based approaches, address gender equity and equality, and the inclusion of marginalised groups, allowing for the better integration of protected and conserved areas into the landscape. As described in the next chapter (Section 4.4), the IUCN Green List of Protected and Conserved Areas Standard (IUCN & WCPA, 2017; Figure 4.3) is the new international sustainability standard to benchmark protected and conserved areas that are both effective and equitable (Hockings et al., 2019). The first component of the Standard focuses on good governance or governance quality, which draws on the following good governance principles: Legitimacy and voice; accountability and transparency; and governance vitality. This concept of governance vitality examines the extent to which planning and management draw on best available knowledge of the social and ecological context of the site, and uses an adaptive management framework that anticipates, learns and responds to change in its decision-making. In particular, it focuses on whether there are procedures in place to ensure that the results from monitoring inform management decisions.

Some of these quality considerations highlighted above can be seen in the YUS Conservation Area. In YUS, the principles of legitimacy and voice are evident. Shared decision-making with consensus is favoured, grounded in the values of local rightsholders and stakeholders. The Management Committee structure constitutes a governance forum for continued and regular dialogue resulting in non-hierarchical decision-making. The direction and performance of YUS are rooted in the identification of conservation objectives that have been collectively agreed upon, and are responsive to the interests of landowners. Decision-making is transparent with accountability ensured at various levels. With regard to fairness and rights, any decisions that are taken with regard to customary lands require the consent of landowners. The Conservation Area strives to empower the local community, and does so successfully through its clear and multi-scaled governance forums and processes.

3.5.1 ASSESSING AND ENHANCING GOVERNANCE: METHODS AND TOOLS

Reporting on governance diversity and quality using governance assessment tools and approaches has increasingly become a focus of the conservation community. In addition to the voluntary guidance on equity that was adopted at CBD's fourteenth Conference of Parties (COP14) in November 2018, the CBD invites Parties to report on the governance of protected and conserved areas (CBD, 2018) as a means of addressing equity.

Reporting on the 'equitable management' aspect of Aichi Target 11 has proved challenging, particularly across diverse contextual settings (Gannon et al., 2019). As such, resources for assessing equity and governance are emerging. These governance assessment approaches range from rapid assessment and evaluation to participatory assessments that may comprise deeper research, validation and discussion with a wider variety of actors such as government authorities, rightsholders and stakeholders, as well as conservation specialists. A brief overview of some examples can be seen in Table 3.4.

TABLE 3.4 Examples of governance assessment methods and tools

Tool	Purpose
IUCN WCPA Best Practice Guidelines No. 20 Governance of Protected Areas (Borrini-Feyerabend et al., 2013)	Guidelines for both system and site level governance assessment with sample questions
Equity Questionnaire (Zafra-Calvo et al 2017)	A prototype questionnaire developed as part of a broader research project
The IUCN Green List Standard of Protected and Conserved Areas, version 1.1 (IUCN WCPA, 2017)	Global standard on effective protected and conserved areas. The Good Governance component and other criteria assist in the assessment of protected and conserved area quality and outcomes
Governance Assessment for Protected and Conserved Areas (GAPA) (IIED, 2019)	GAPA is a tool for assessing the quality of governance in protected and conserved areas
ICCA Self Strengthening Process (Borrini-Feyerabend & Campese, 2017)	An ICCA resilience and security assessment, which includes governance assessment, which is done as part of a broader self-strengthening process
Site Assessment of Governance and Equity (SAGE) (Franks & Pinto, 2021)	SAGE is a tool for rapidly assessing the quality of governance in protected and conserved areas

Source: Jennifer Kelleher

IUCN has published a set of best practice guidelines for assessing governance at two scales, national or system level and site level (Borrini-Feyerabend et al., 2013). This publication offers guidance to understand the four main protected area governance types and the set of principles of good governance recognised by the IUCN, on the basis of examples from all over the world. It also offers practical guidance for those willing to embark on the process of assessing, evaluating and improving governance for their systems of protected areas or individual sites.

A system-level assessment assumes that no protected area will be effective or equitable if it is not considered within its broader landscape. Most threats to protected areas stem from outside the boundaries of the protected area itself (Davey, 1998), including encroachment, poor connectivity in the wider landscape and a lack of resources (Schulze et al., 2018). As such a 'system' assessment examines the entire landscape or seascape and in particular examines the coordination of these interlocking sectors and land and water uses. This can also examine the extent to which private actors, such as key tourism partners, make significant contributions to area-based conservation, but may not be necessarily reported as part of national targets (Mangubhai et al., 2020). While a variety of government agencies are in charge of governing the system of official protected areas, the overall coverage of protected areas and conserved areas may be substantially larger. These may also fall under a system level analysis.

A site-level governance assessment focuses on governance quality in one particular protected or conserved area. SAGE (Site-level Assessment of Governance and Equity) is a tool for assessing the quality of governance of a protected or conserved area – including equity – using a framework of 10 governance and equity principles based on IUCN and CBD guidance, and meeting the criteria of the IUCN Green List Standard (IUCN & WCPA, 2017). It is a rapid process that enables stakeholders at a site to identify governance challenges and potential actions to address them, and provides managers at higher levels with an assessment of governance quality that can be used for management oversight, reporting or the IUCN's Green List process.

As with many protected area management effectiveness (PAME) methodologies, SAGE generates rating data using a questionnaire with around 40 questions conducted via a multi-stakeholder process. The main activity is a two-day workshop which starts with different stakeholder groups doing the assessment separately, thereby revealing differing stakeholder perspectives. Stakeholders then discuss the reasons for any differences in scoring, explore whether consensus can be reached, and identify actions to improve governance and equity that might be taken up by one or more stakeholders.

The output of SAGE has three main elements:

a. Site profile of the protected or conserved area and contextual issues relevant to governance and equity;

b. Impact analysis including both the environmental impacts from the activities of people and other hazards (i.e. threats to the site) and the social impacts of the site and its conservation on people; and

c. Governance and equity *scorecard* with the scores and supporting evidence from different stakeholder groups for each of the 40 questions and, where possible, consensus scores.

While SAGE identifies governance strengths and weaknesses, it is not a diagnostic tool that can explore deep underlying causes of governance problems. For this, a more in-depth assessment is needed, such as the International Institute for Environment and Development's Governance Assessment for Protected and Conserved Areas (GAPA) (Booker & Franks, 2019). GAPA is a multi-stakeholder assessment for use by site managers, communities living within and around a protected or conserved area or other stakeholders and rightsholders at local and national levels. The primary goal of GAPA is to improve the governance of the target site and any related conservation and development activities.

The methodology uses a combination of:

i. key informant interviews and focus group discussions to identify the governance strengths and challenges and ideas for action; and

ii. stakeholder workshops to discuss and validate the results and review the ideas for action to improve the situation.

There is an optional extra:

iii. a site-level governance scorecard to provide a quantitative assessment of site-related governance issues and the diversity of views on these issues within and across communities. The assessment itself typically takes five to ten days depending on the size of the area and logistics. Following the assessment, and an integral part of the methodology, is an action phase comprising a set of activities to support stakeholders to implement key actions to improve governance that were suggested by the assessment.

There are several other governance assessment guidelines that may be more appropriate for site-level assessments of indigenous protected and conserved areas, some focus on self-strengthening but the diversity of indigenous governance arrangements poses a particular challenge owing to the different worldviews and cultural interpretation upon which they are based. Developing nationally or locally appropriate approaches for Oceania would be necessary.

3.5.2 STATUS OF GOVERNANCE QUALITY IN OCEANIA

There has been very little work done to evaluate governance quality in the region, however there have been some studies on governance effectiveness which relate to some aspects of governance quality. For example, in an examination of the functionality of governance of small-scale fishing in the Northern Reefs of Palau, Carlisle and Gruby (2018) found that the movement from community-based management to a more polycentric governance approach with nested systems of customary and national rules has produced conditions that erode local compliance with customary rules by vesting more decision-making authority in higher-level government decision-makers with little capacity for rule implementation. In another study from Fiji, Gurney et al. (2021) identified heterogeneity in local perceptions of fairness associated with governance and management of the Vatu-i-Ra Conservation Park. They found that levels of formal education and wealth had a strong effect on how rightsholders assess the fairness of distributed benefits associated with management. This type of emerging research provides insights into practical steps that might be taken to improve governance quality in Oceania within the context of the legal pluralism that is widespread in the region, where there is an overlap of customary rules and state legislation that govern protected and conserved areas (e.g. Rohe et al., 2019).

3.6 Conclusion

The dichotomy of the two predominant governance types within the region is striking. By number, the vast majority of protected and conserved areas are community-based, representing nearly a quarter of these sites reported across the planet. This is incredibly significant. In contrast, government-run sites cover a greater spatial extent in the marine realm. National legislation should provide flexible frameworks, recognising and empowering this range of potential governance arrangements. In particular, national authorities should provide communities with a robust legal basis for managing their resources and enforcing customary rules. In support of this, reviews of national legislation focusing on the elements of effective protected area legislation (Table 3.1) could be useful for understanding the current gaps and opportunities. Ideally, these frameworks should aim to adopt and adapt at least some of the good governance principles. The IUCN Green List Standard may provide an opportunity to engage national agencies and government partners to a global community of practice.

Conducting governance quality assessments can guide our understanding of whether a protected or conserved area is equitably managed and likely to succeed in the long term.

In Oceania, there has been very little work done on this and the 'status' of governance quality is largely undocumented. It is likely that community-based approaches have more equitable decision-making processes – even though inequities may exist within and across communities. Global tools could be suitably applied to government sites such as the large offshore protected areas. These tools could also be applied to community-based protected and conserved areas, but regional or national adaptations would enhance their contextual relevance and potentially increase their use. It is important that these processes respect traditional decision-making and are conducted by people who have a strong understanding of the cultural and historical context (e.g. conflict over clan boundaries). This includes being aware of vulnerable groups such as internal migrants.

Lastly, the case studies in this chapter highlight that there are many protected and conserved areas that are equitable and well-governed. These should not only resonate as exemplars of good practice across the region but also more broadly. Oceania offers the global conservation community many lessons on how to empower indigenous peoples and local communities to manage their resources to achieve biodiversity and social outcomes.

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CHAPTER 4

MANAGEMENT EFFECTIVENESS

Sirebe Protected Area, Solomon Islands (© NRDF)

AUTHORS

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MANAGEMENT EFFECTIVENESS

CHAPTER 4

Management effectiveness

4.1 Overview of management effectiveness

Communities in Oceania have longstanding cultural practices that foster conservation of resources and setting special areas aside from exploitation. They have expanded the extent of their systems of protected and conserved areas in response to both national conservation plans and international targets for area-based conservation under the Convention on Biological Diversity's (CBD) Strategic Plan. As outlined in Chapter 2, this has been a significant achievement for conservation in both terrestrial and marine environments. However, there is increasing recognition that simply designating areas of land and sea as protected does not necessarily secure their biodiversity or underpin local livelihoods. In other words, the quality of management is also vital.

This question of quality is the focus of work on management effectiveness of protected areas. Management effectiveness is a measure of how well protected and conserved areas are being managed – primarily the extent to which management is effective at conserving the area's natural, cultural and social values and achieving goals and objectives, such as protecting biodiversity (Hockings et al., 2006; Leverington et al., 2010). Specific components of good management vary with the context and the characteristics of each protected and conserved area: for example, a remote community-based protected area with few visitors needs fewer staff and recreational facilities than an iconic tourist destination.

There has been a lot of work over the past thirty years to define general characteristics of well-managed protected and conserved areas, and then to measure how well individual areas match these standards. These desirable characteristics have been incorporated as indicators in methodologies, such as the Management Effectiveness Tracking Tool (METT), and formed the basis of the 'common reporting format' for the global compilation of management effectiveness data (Leverington et al., 2010).

More recently, the IUCN Green List of Protected and Conserved Areas (Section 4.4) has undertaken a detailed and robust exercise to develop global standards for protected and conserved areas, which can be tailored and interpreted for different countries and contexts. The IUCN Green List as well as development of new tools and amendment of existing assessment systems have placed much greater emphasis on assessment of biodiversity and social outcomes as key measures of protected area quality (Hockings et al., 2019).

4.2 Evaluating management effectiveness

While managers, whether government agencies or local communities, have always been interested in doing their best to manage areas for conservation, explicit attention to the evaluation of management effectiveness arose in the 1980s and 1990s (Hockings et al., 2004), as evidence mounted that biodiversity condition continued to decline in spite of efforts to expand coverage of protected areas. This led the IUCN World Commission on Protected Areas (WCPA) to start work on developing approaches to evaluating management effectiveness in 1996, culminating in the publication of guidelines on this topic in 2000 (Hockings et al., 2000). These guidelines, subsequently revised in 2006 (Hockings et al., 2006), provided a framework to guide development of assessment methods (IUCN WCPA Framework – Hockings et al., 2006) and have formed the basis for most of the work on assessing management effectiveness since that time.

These guidelines define management effectiveness for protected areas[12] as:

> the assessment of how well the protected area is being managed – primarily the extent to which it is protecting values and achieving goals and objectives. The term management effectiveness reflects three main themes:
>
> - design issues relating to both individual sites and protected area systems;
> - adequacy and appropriateness of management systems and processes; and
> - delivery of protected area objectives, including conservation of values.

The IUCN WCPA Framework has guided the development of many evaluation systems, which vary from rapid, largely qualitative approaches that rely primarily on the expert knowledge of managers and stakeholders (Ervin, 2003; Stolton et al., 2003) to more quantitative methods that draw upon the results of monitoring programmes conducted in the protected area (Hockings et al., 2008).

The purpose of management effectiveness assessment is unambiguously to improve the outcomes of protected and conserved areas in terms of both biodiversity conservation and delivery of social and cultural outcomes. It does this by identifying where shortfalls in management resources, systems and approaches may be impeding the delivery of management objectives. In many instances, improving management effectiveness may deliver a better return on investment than adding more area to an inadequately managed protected and conserved area system (Adams et al., 2019).

Management effectiveness has become one of the important indicators of quality in assessing progress against global protected and conserved area targets and programmes. The Programme of Work on Protected Areas (PoWPA) of the CBD set the first targets for assessing management effectiveness, calling on signatories to the Convention to adopt, implement and report on management effectiveness assessments and to use the results of assessments to improve management of sites (CBD 2004). In 2010, they set a target for Parties to assess management effectiveness of 60% of their protected area estate by 2015 (CBD, 2010). This was followed by the inclusion of a requirement for “effectively and equitably managed” protected and conserved areas within Target 11 of the CBD Strategic Plan for Biodiversity 2011–2020 (CBD, 2011).

Around the world, the Global Database on Protected Area Management Effectiveness (GD-PAME), maintained by the UNEP World Conservation Monitoring Centre (UNEP-WCMC), records over 27,400 management effectiveness site assessments from 180 countries (https://pame.protectedplanet.net/ accessed 11 January 2021; Figure 4.1), but this database needs considerable work to ensure it accurately reflects the current status.

[12] The IUCN WCPA Guidelines were written for protected areas but can be applied equally to protected and conserved areas of all types.

In this chapter, we introduce some methods for assessing management effectiveness and outline the known studies in Oceania. We present the IUCN Green List as a new tool with global standards that offers promise for the region. As the number of studies is still quite low and there is not sufficient information across the whole study area, we have not been able to analyse the overall status of management effectiveness of protected areas in the region, nor to draw conclusions about regional strengths and weaknesses. Instead, we describe two in-depth assessments that have been carried out in Papua New Guinea and Palau, and the World Heritage Outlook assessments that have looked at management of natural World Heritage sites in the region. Finally, based on these results, we consider how evaluation studies and management quality might be improved in the future.

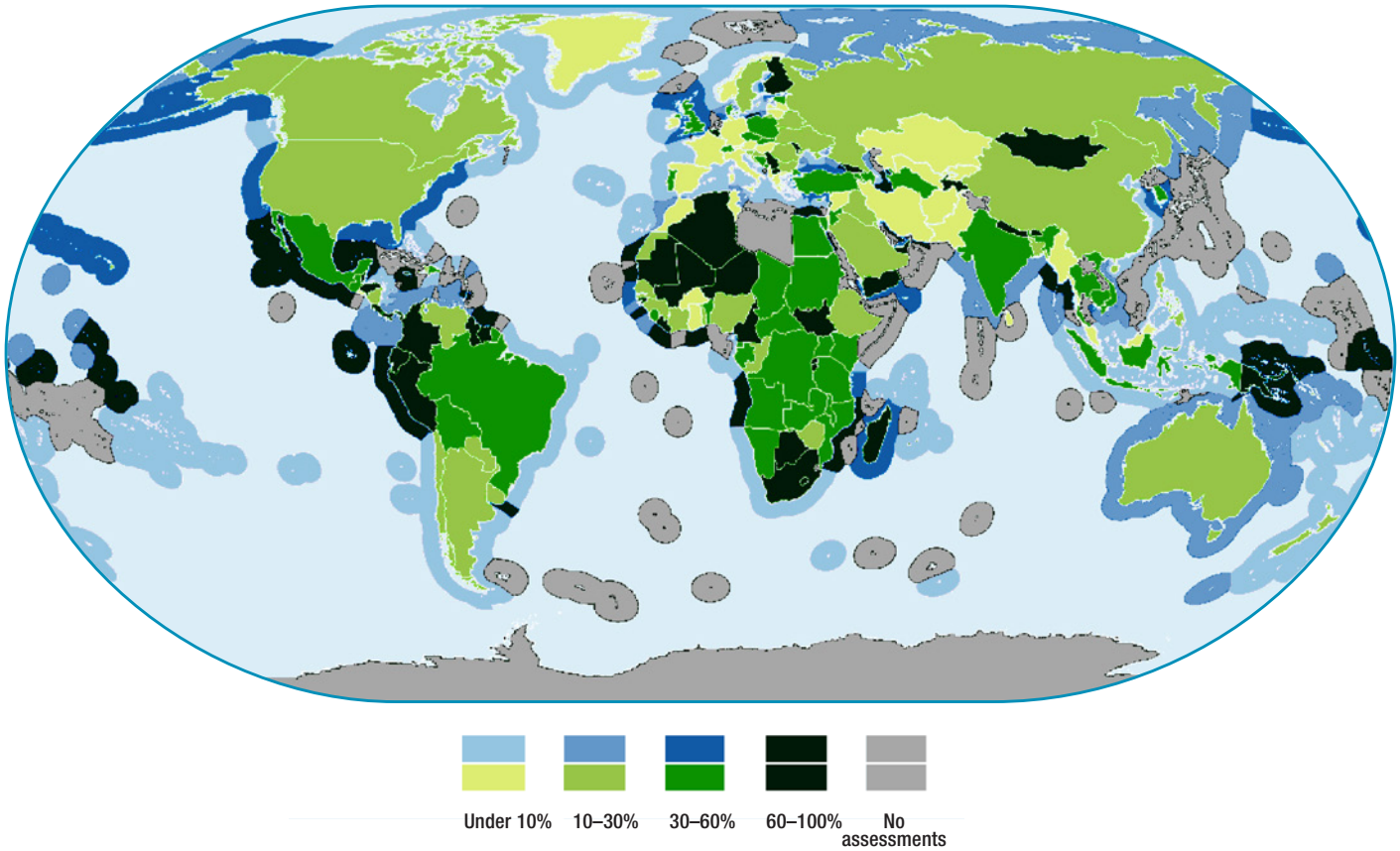


FIGURE 4.1 Percentage of protected area coverage per country that has been assessed for management effectiveness. *Source: Compiled by UNEP-WCMC using data from UNEP-WCMC and IUCN (2021a). A global study of protected areas in 2010 (Leverington et al., 2010) found that only a quarter of protected areas were considered soundly managed and almost 15% showed very low effectiveness.*

BOX 4.1 METT-4: THE MANAGEMENT EFFECTIVENESS TRACKING TOOL VERSION 4

Sue Stolton, Marc Hockings and Nigel Dudley

Following growing interest in protected area management effectiveness (PAME), in 1999 the World Bank/WWF Alliance for Forest Conservation and Sustainable Use set a target of 50 million hectares of existing but highly threatened forest protected areas to be secured under effective management by the year 2005. Various methods were used to measure the target, culminating in development of the Management Effectiveness Tracking Tool (METT), a simple, questionnaire type approach developed in 2002. The METT has since become the most widely applied PAME tool, used in over 2,500 protected areas covering over 4.2 million km^2 (i.e. over a fifth of the world's terrestrial protected areas by area) in at least 127 countries.

The METT has been updated and adapted several times since 2002, culminating in the latest version (METT-4) which represents a major leap forward for the METT. The tool has moved from a Word document to an Excel file with a range of functions to support the assessment process, present the results and use the tool more effectively for adaptive management. Additional questions have been added to address issues relevant to protected areas today (e.g. climate change) and provide a greater focus on the assessment of outcomes; the lack of which had been a common criticism of the METT.

METT-4 is currently being implemented in a number of protected and conserved areas around the world, including in Oceania. The revised tool has maintained the flexibility for adaptation that was one of the factors leading to the widespread adoption of the earlier versions of the METT as the basis for national assessments of management effectiveness (for example in Indonesia, South Africa, Bhutan and Papua New Guinea). This adaptability will be important in addressing protected area systems in Oceania. In most cases, the assessment questions can stay the same, with some modification to language rather than modification of meaning or intent, but the guidance notes that accompany each item of assessment need to be modified to put the assessment into the local context. Work on adaptation of the METT in Vanuatu illustrates this approach; here the focus was on changing language to match local systems of protection and, for example, adapting guidelines to focus on community members in management rather than full-time paid staff.

The METT-4 workbook can be downloaded from https://www.protectedplanet.net/en/thematic-areas/protected-areas-management-effectiveness-pame?tab=METT. Information about METT-4 is available from Marc Hockings (marc@paconservation.com); Sue Stolton (sue@equilibriumresearch.com) and Nigel Dudley (nigel@equilibriumresearch.com).

METT training and adaption workshop held in Port Vila, Vanuatu (© Paul van Nimwegen/IUCN)

4.3 How can management effectiveness be assessed?

Across the world, we know that more than 60 methodologies have been applied for assessing management effectiveness, with most of them designed using the IUCN WCPA Framework and drawing on a variety of types of evidence. Both quantitative and qualitative data have their strengths and weaknesses in providing evidence for assessing management effectiveness (Hockings et al., 2009). The most widely applied methodology globally, and also one of the most rapid, is the Management Effectiveness Tracking Tool or METT (Stolton & Dudley, 2016; Stolton et al., 2019). Recent advances in the METT are described in Box 4.1.

An overview of some of the more commonly applied evaluation tools (Table 4.1) identifies their general structure and means of implementation and some of the strengths and weaknesses of each approach. Using the global assessment tools in Oceania can be challenging, as the approach to managing protected and conserved areas in the region can be different from other parts of the world, particularly influenced by tenure systems and community obligations. Protected area management agencies with on-ground staff, well developed budgets, equipment and infrastructure are less common and so indicators of these aspects of management do not fit well with management approaches in many countries. In addition, assessments involving communities need to carefully consider that wording, language and concepts are appropriate to the people involved and are carefully explained. While the questions in the chosen methodology are important, it is also vital to pay attention to the process. Comments and qualitative information need to be recorded so that assessments can lead to meaningful change. Adaptations of the METT were made in Papua New Guinea (Leverington et al., 2017) to address this issue and a similar adaptation of the METT is currently underway in Vanuatu.

4.3.1 SCORING SYSTEMS

Most evaluation systems are based on assigning scores that provide an indication of management quality in different aspects of management. The scores across a large number of evaluations generally reflect a range from protected areas with no management at all to those with very high management standards. Different tools and reports have different rating and scoring systems, and this can lead to confusion, so a global study of management effectiveness evaluation developed a method to convert these varying scores to a common scale that ranged from 0 to 100% (Leverington et al., 2010). As shown in Figure 4.2, the lowest third of this range (below 33%) means that protected area management is clearly inadequate (categorised as 'Poor'). Scores between 33% and 66% indicate that while some progress and basic management is in place, considerable improvement is still needed. As most scores fall into this category, scores were further split into categories between 33% and 50% ('Significant concern') and those between 50% and 66% ('Good with some concern'). Generally, a sound level of management would begin at a score of 67% (categorised as 'Good'). Scores above this indicate that the area is being managed relatively well, though there is recognition that even within this category many aspects of management may still need improvement. These thresholds align with the outputs of the most common PAME assessment systems. The global study of protected areas in 2010 (Leverington et al., 2010) found that only a quarter of protected areas were considered well managed and almost 15% showed poor effectiveness.

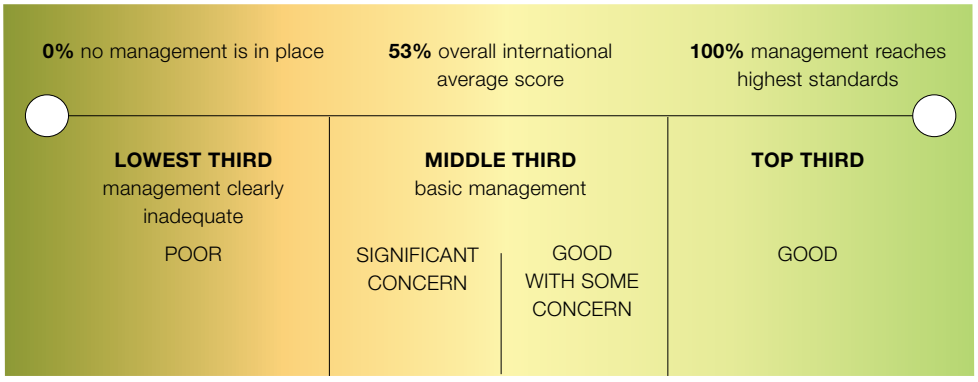


FIGURE 4.2 Meaning of the PAME scores. *Source: Leverington et al. (2010)*

TABLE 4.1 Characteristics of some of the more commonly applied management effectiveness systems

	Characteristics				
Methodology	**Overall structure**	**Data types**	**Implementation**	**Strengths**	**Weaknesses**
METT (Stolton et al., 2019)	Rapid assessment scorecard of data sheets and 30 scored questions (38 in METT-4) across all six IUCN-WCPA elements but with emphasis on context, planning, inputs and processes. The data sheets collect information on budgets, staffing, principal protected area values, objectives and threats. The most recent revision of the METT collects additional assessments and data on biodiversity outcomes and issues such as climate change adaptation. An adaptation of the METT has been developed for Papua New Guinea to make it more suited to local context.	Mostly qualitative assessments using a 4-point ordinal scale. The latest version (METT-4) includes more detailed justification for assessments and sources of data as well as recording quantitative data on biodiversity outcomes for major species/habitats.	Usually workshop-based (1–2 days) with input from managers (may include stakeholder input also).	Rapid and consistent evaluation across all elements of the IUCN WCPA Framework that has been very widely applied. It is best when implemented through a multi-stakeholder workshop. The Advanced METT is much stronger than the original tool in assessing biodiversity outcomes and in linking quantitative monitoring data to the assessment.	Remains a rapid assessment system and accuracy depends on quality of implementation. Does not constitute an independent assessment of effectiveness.
Rapid Assessment and Prioritisation of Protected Area Management (RAPPAM) (Ervin, 2002)	Designed for broad-level comparisons among many protected areas that together make a network or system. It covers five of the WCPA management effectiveness elements (context, planning, inputs, processes and outputs). RAPPAM was applied in Papua New Guinea and Samoa in the late 2000s.	Mostly qualitative assessments using a 4-point ordinal scale. Threats are rated according to their extent, impact and trend. Includes indicators addressing protected area system level issues.	Workshop format (1–2 days) with managers and other knowledgeable participants across the range of protected and conserved areas involved in the assessment.	Addresses whole networks of protected areas including some aspects of system management. Designed to assist in prioritisation of sites based on values and threats and identification of management strengths and weaknesses.	Does not provide in-depth assessment of effectiveness at a site level and has very limited consideration of outcomes. Not intended for site-level adaptive management.
World Heritage Outlook See www.worldheritageoutlook.iucn.org	IUCN's World Heritage Outlook has been developed and implemented by IUCN to track the state of conservation of natural World Heritage sites. Assessments are undertaken every 3 years, by the IUCN Secretariat working with independent experts who are familiar with the sites and supported by consultation. The assessments address current state and trend of values, threats and effectiveness of protection and management. It has been applied three times to the natural World Heritage sites in the region.	Qualitative assessment on 4-point ordinal scale (plus data deficient) supported by quantitative and published data. Based around elements that underpin the Outstanding Universal Value of World Heritage sites.	Desktop assessments by independent experts with knowledge of the site, checked with managers and others with extensive consultation.	Consistent evaluation across all natural World Heritage sites drawing on multiple knowledge sources and using people with knowledge of the sites to compile evidence. Consistency of assessment is enhanced by review processes across sites during the coordinated global assessment.	Desktop assessment only. Gradings allocated to indicators are subjective to a degree, although backed by documented evidence.
Country/region specific evaluation systems	Developed as country specific assessment systems. Many can be grouped under generic 'State of Parks' approach with indicators based on ordinal scales. Some systems are developments or elaborations of the METT tool but with substantial modifications, such as in Micronesia using the MPAME tool.	Qualitative assessments using various ordinal scales. Generally completed as part of a project with community and stakeholder input.	Frequently implemented as part of project activities (e.g. associated with Micronesia Challenge) or through NGOs.	Strong link to project and NGO activities means that results of assessments can feed directly into ongoing planning and management. Indicators and questions have been specifically adapted to Oceania and national contexts.	Mostly rapid assessment systems for which accuracy depends on quality of implementation. Justification of scoring by stronger links to evidence would help. If the assessments are project-based, they may be one-off with no funds to support long-term monitoring.

4.4 IUCN Green List of Protected and Conserved Areas

The IUCN Green List of Protected and Conserved Areas is the first global standard of best practice for area-based conservation (Hockings et al., 2019). It is a programme of certification for protected and conserved areas that are fairly governed and effectively managed. The objective of the Green List programme is to increase the number of protected and conserved areas that deliver successful conservation outcomes through good governance, sound design and effective and equitable management.

At the heart of the IUCN Green List programme is a globally applicable Standard. It provides an international benchmark for quality that can motivate improved performance and achievement of conservation objectives (see https://iucngreenlist.org/about/). By committing to meet the IUCN Green List of Protected and Conserved Areas global standard, site managers seek to demonstrate and maintain performance and deliver real nature conservation results. The intent is to use the Standard across all regions and countries of the world, on land and in the sea. In order to do this, the Standard needs to be universal but also adaptable to countries and jurisdictions without compromising quality. It is designed to be globally applicable and inclusive – not only for the most well-resourced areas or sites in the world. It is designed to be sufficiently rigorous to ensure sites demonstrate the achievement of conservation objectives and outcomes, as a result of good governance, sound design and effective management.

The four components of the Green List Standard are Good Governance, Sound Design and Planning, and Effective Management, which work together to lead to Successful Conservation Outcomes. These components contain a set of 17 criteria (Figure 4.3), further subdivided into 50 generic indicators with associated means of verification.

While these components and criteria are designed to be universal and therefore applicable to all protected and conserved areas, their expression and assessment will be context-dependent. The Green List process provides for adaptation of the indicators and the recommended means of verification for each jurisdiction.

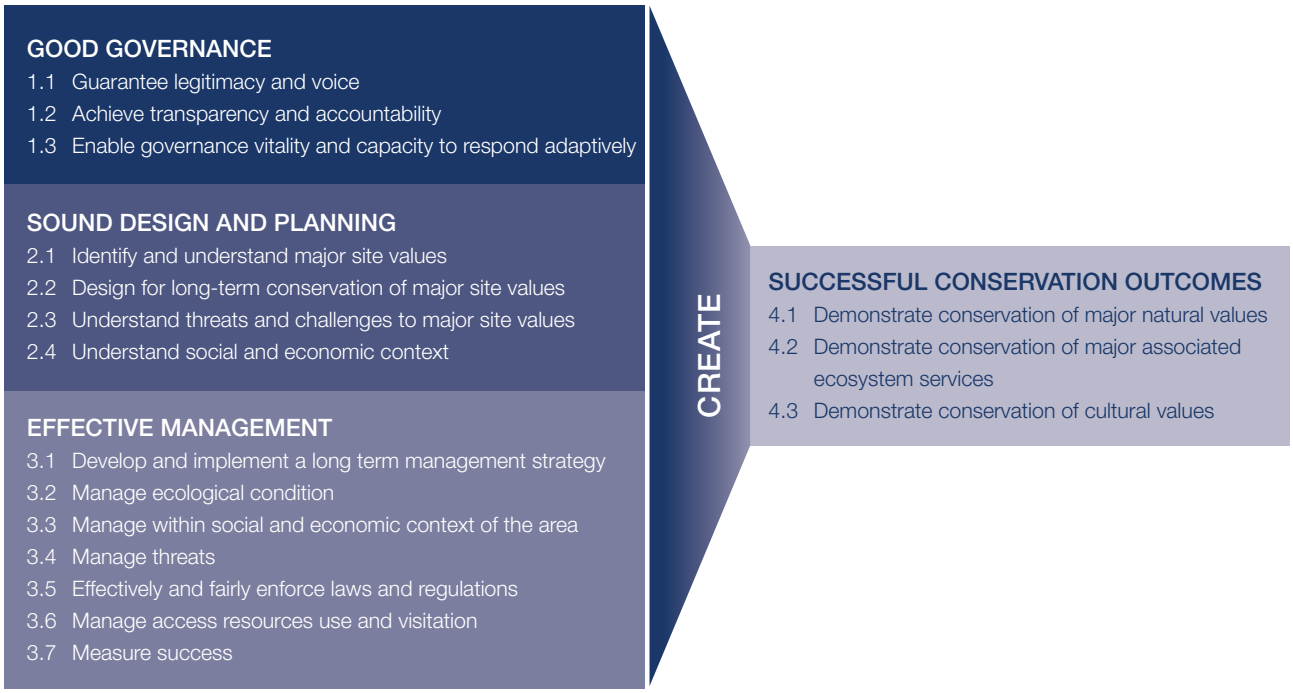


FIGURE 4.3 The IUCN Green List Standard components and criteria. *Source: Hockings et al. (2019)*

The IUCN Green List Standard is designed and managed globally by IUCN, although the main activities of the Green List process are implemented regionally or nationally for specific jurisdictions. At the heart of this implementation system, a series of expert groups provide the working mechanisms for the listing process, together with the managers of sites nominating for the Green List. The Expert Assessment Groups for the Green List (EAGLs) are composed of experts in protected area management who volunteer their time to support the programme at national or regional level. The first job of the EAGL is to adapt the global Green List indicators and means of verification to the context of the jurisdiction.[13]

The engagement of sites in the Green List process is voluntary and may not include all protected areas in a jurisdiction, but the Green List Standard itself can help guide the management of all areas. While there are no listed Green List sites in Oceania at present, there is interest in the programme in the region, with the first site registered as a candidate in New Caledonia.

Challenges to be addressed in applying the Green List in Oceania include the organisational logistics required to operate the programme in a coordinated way across a number of small island states. There are also problems in forming and operating an EAGL with limited experts dispersed across the region, lack of monitoring data to assess the current state of protected areas, and appropriate adaptation of indicators to account for the strong community-based management approach used in the region. Any application of the Green List in Oceania should be integrated with existing work on management effectiveness assessment and focused on sites with the capacity to engage in this programme.

Celebration in Goroka, Papua New Guinea (© The Kwiop Community Land Trust)

[13] A jurisdiction is a locality, country, region or other geographic area that engages as one entity with the Green List programme.

4.5 PAME studies in Oceania

It is hard to obtain accurate data on assessments that have been conducted in Oceania, but it is clear that management effectiveness studies have been less widely applied than in many other regions of the world (Leverington et al., 2010). Scattered assessments have been undertaken across the region as part of GEF-funded projects, and there have been a few coordinated studies such as the Papua New Guinea METT and RAPPAM, Palau PAME, and Micronesia Protected Area Management Effectiveness (MPAME) scorecard (Table 4.2). Note that for some of the listed assessments, results are not available. Not all of the listed assessments are for protected areas contained in the WDPA.

TABLE 4.2 Number of protected and conserved areas with recorded PAME assessments in Oceania, 2000–2020

	METT	PNG METT	WH Outlook	RAPPAM	MPAME	Marine Scorecard	Total sites assessed	No. of protected areas	% of total protected areas assessed
American Samoa							0	19	0
Cook Islands							0	11	0
Fiji	6 (9)						6	145	4
French Polynesia	2 (4)						2	10	20
FSM	2 (4)				15[14]		17	5	100
Guam					1		1	15	7
Kiribati			1 (3)				1	13	8
RMI					5		5	15	40
Nauru							0	0	0
New Caledonia			1 (3)				1	109	1
Northern Mariana Is						1	1	32	3
Niue	5						5	6	83
Palau			1 (3)		31 (36)[15]		32	66	48
Papua New Guinea	4	59[16]		49[17]			59	55	100
Pitcairn Islands			1 (3)				1	2	50
Samoa	4			6			9	95	9
Solomon Islands	2		1 (3)				3	86	3
Timor-Leste							0	63	0
Tokelau							0	3	0
Tonga							0	50	0
Tuvalu							0	18	0
Vanuatu	7						7	47	15
Wallis-Futuna							0	1	0
Total assessments	**39**	**59**	**15**	**55**	**57**	**1**			
Total							**150**	**866**	**17**

[14] Isechal et al. (2014).

[15] Isechal et al. (2014) and PAN Office (2016).

[16] Leverington et al. (2017).

[17] Chatterton et al. (2006).

Numbers in parentheses indicate the number of repeat assessments where sites have been assessed on multiple occasions. METT = Management Effectiveness Tracking Tool; PNG-METT = Papua New Guinea adaptation of METT; WH Outlook = World Heritage Outlook; RAPPAM = Rapid Assessment and Prioritisation of Protected Area Management; MPAME = Micronesia Protected Area Management Effectiveness. The number of protected areas is based on UNEP-WCMC and IUCN (2021b), see Box 2.1.

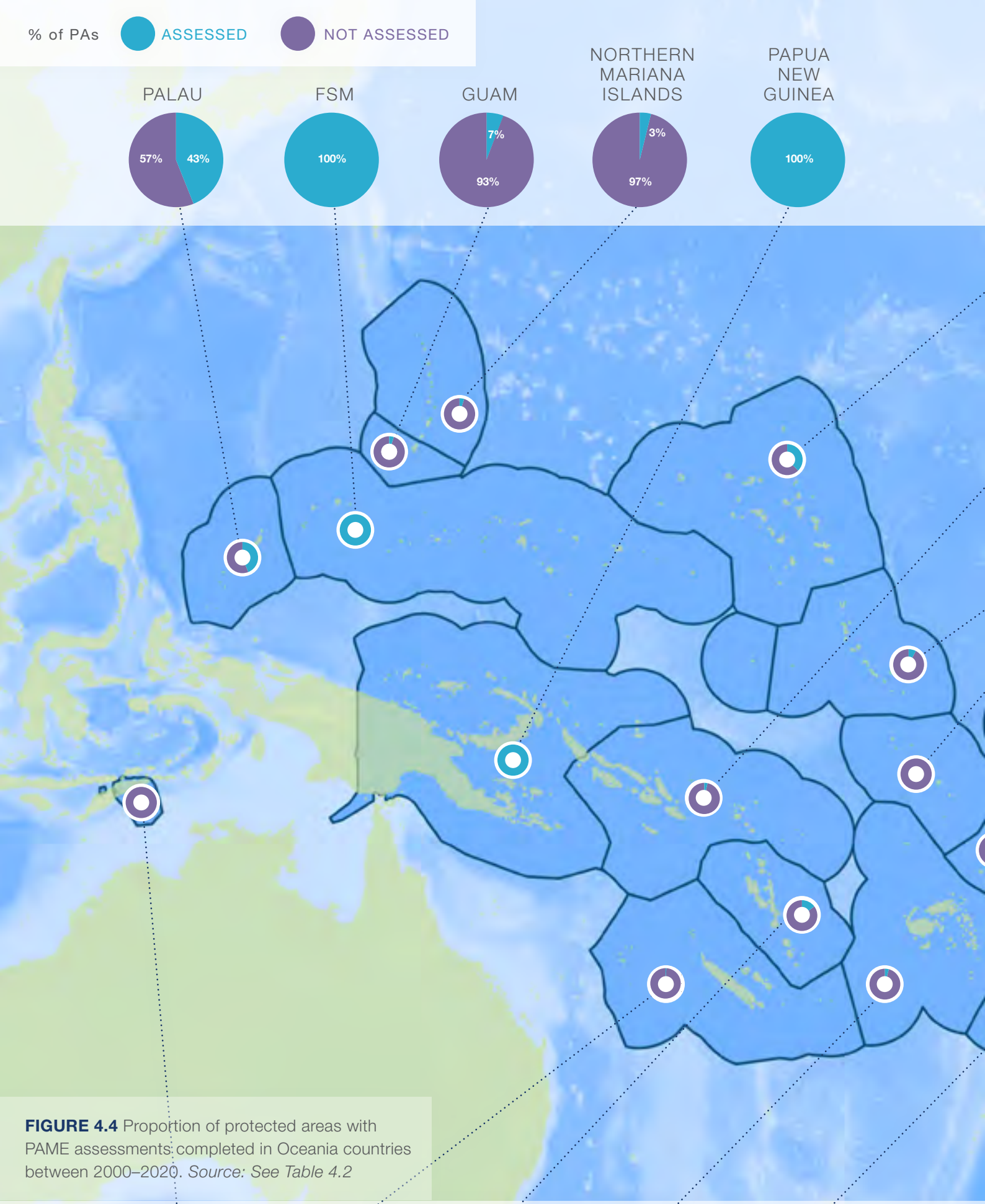
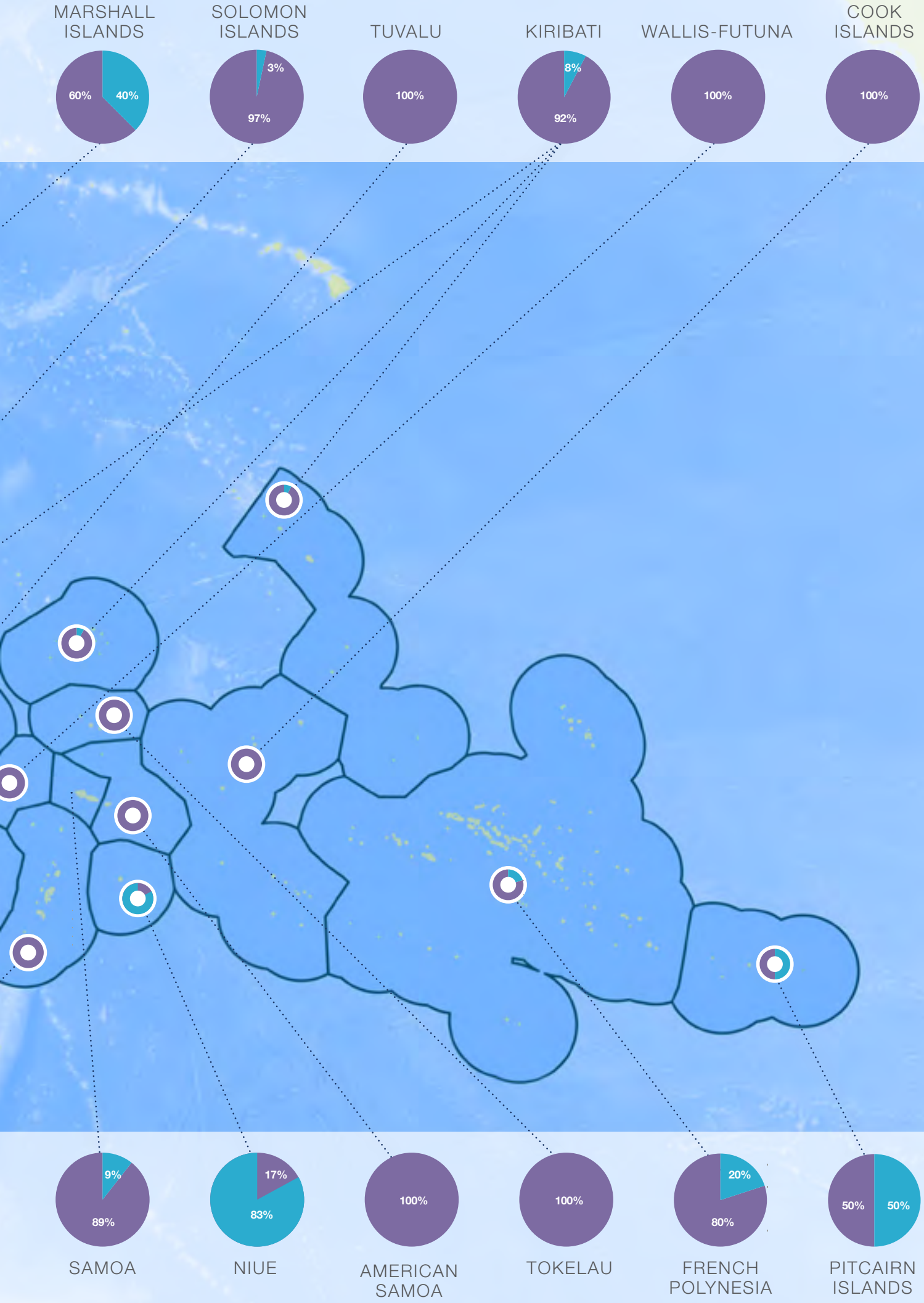


FIGURE 4.4 Proportion of protected areas with PAME assessments completed in Oceania countries between 2000–2020. *Source: See Table 4.2*


MARSHALL ISLANDS
60%
40%
SOLOMON ISLANDS
3%
97%
TUVALU
100%
KIRIBATI
8%
92%
WALLIS-FUTUNA
100%
COOK ISLANDS
100%
SAMOA
9%
89%
NIUE
17%
83%
AMERICAN SAMOA
100%
TOKELAU
100%
FRENCH POLYNESIA
20%
80%
PITCAIRN ISLANDS
50%
50%

In total, there are records of 226 assessments across 150 protected areas. Using the number of assessments recorded in this study and the number of known protected areas in Oceania, just under one in five protected areas (17%) have been assessed. Two countries have assessed all their protected areas: Federated States of Micronesia and Papua New Guinea. The proportion of protected areas assessed in each country is shown in Figure 4.4.

An analysis of management effectiveness across all the protected areas and countries of the region is not possible, due to the patchy distribution of the assessments, and the fact that for most of the countries there is no available access to assessment results. For this reason, we present below discussion of three case studies that together cover two-thirds of the assessed sites, including many of the largest and most significant areas. These case studies also cover a wide range of situations and protected area types on land and sea, so provide a good basis for identifying some of the patterns and priorities in the region.

Blue-ringed Octopus swimming among the reefs in Papua New Guinea (© Jayne Jenkins)

4.6 Management effectiveness evaluation in Papua New Guinea[18]

Papua New Guinea (PNG) is the largest country in the Pacific Islands of Oceania region, with a land area of 452,860 km^2, and it has the highest population in the region, estimated at 8.9 million in 2021 (https://worldpopulationreview.com/countries/papua-new-guinea-population). The people of PNG take pride in their strong and diverse culture, with an estimated 800–1,020 languages spoken by over a thousand different tribal groups nationally (SPREP, 2020). Biodiversity on both land and sea is outstanding, with the range of habitats including open sea, coral reef, seagrass beds and mangroves, grasslands, wetlands and lakes, savannah, tropical rainforest and alpine grasslands. The main island of New Guinea (including West Papua) supports an estimated 5–9% of the world's terrestrial biodiversity in less than 1% of the land area (Mittermeier et al., 1998). The high number of species and endemism qualified it to be listed as one of the world's 17 mega-diverse countries (Mittermeier et al., 1997). There is a high level of endemism in PNG – species found nowhere else in the world, with many other species occurring across the island of New Guinea but not elsewhere. A third of the reptiles and 77% of frogs are endemic to PNG (Allison & Tallowin, 2015). Two-thirds of animal species and a fifth of plant species in PNG are listed as decreasing, with the population trend of most of the rest unknown (IUCN, 2020). PNG's marine biodiversity is also significant: it lies within the Coral Triangle[19], and supports 500 species of stony corals, 1,635 reef associated fish species, 43 mangrove species and 7 seagrass species (SPREP, 2020).

Conservation in PNG is struggling with many external threats and with a history of poor governance, and the protected area system is attempting to expand and strengthen under difficult conditions. PNG's Policy on Protected Areas commits to a substantial expansion of a relevant and comprehensive reserve network and to managing this network to a high standard through a cooperative model with customary landowners supported by governments and civil society. The Policy also commits to regular evaluation of management effectiveness, and to taking remedial action to improve effectiveness over time.

> Management effectiveness of Protected Areas will be regularly evaluated on a national basis, and improvements will be put into place based on assessment results. Where Protected Area effectiveness or wildlife populations and health are shown to be declining or at risk, causes will be investigated and corrective measures rapidly implemented. (Independent State of Papua New Guinea, 2014, p. 50)

While most protected areas in PNG have been established for twenty years or more, their management has remained patchy and problematic, with little support from national or provincial governments. A national evaluation of protected areas was conducted in 2004 using the RAPPAM methodology and including extensive field visits (Chatterton et al., 2006). This provides an excellent baseline study.

In 2016–2017, the Government of Papua New Guinea, through its Conservation and Environment Protection Authority (CEPA) and with the support of the GEF, the United Nations Development Programme (UNDP) and SPREP, set up an evaluation of its 58 protected areas and seven other conserved areas, as part of the process to improve management effectiveness. Modifications to the standard METT to develop the 'PNG-METT' (Leverington et al., 2017) included:

- Ensuring the appropriateness of the questionnaire and the workshops to the PNG context;
- Adding questions about protected area benefits and values, and the condition and trend in these values over time; and
- Recording participants' views about how the management of their protected areas could be improved (e.g. in relation to the values, threats and various management effectiveness themes).

The PNG-METT was implemented through a series of workshops, which were important to build relationships between customary landowners, the government and other parties.

[18] All information in this section is extracted from the report on PNG's management effectiveness (Leverington et al., 2018) and was current at that time. It should be noted that PNG's Conservation and Environment Protection Authority (CEPA), with continued assistance from GEF and other donors, has been working hard to improve effectiveness since that time. An updated version of the methodology is being developed in 2021.

[19] The Coral Triangle covers 6 million km^2 within six countries – Indonesia, Philippines, Malaysia, Solomon Islands, Papua New Guinea and Timor-Leste. It is an epicentre of marine biodiversity. See https://www.conservation.org/projects/coral-triangle-initiative.

MANAGEMENT EFFECTIVENESS SCORES

Overall, progress to establish a well-managed protected area network in PNG was very limited (Figure 4.5). Only eight of 58 protected areas were rated as achieving 'Good' standards or 'Good with some concerns'. The remainder were struggling to deliver even basic management. Most had no budget, no paid staff, and no infrastructure and equipment. However, in about half the protected areas, some voluntary activities were undertaken by the community, and just under half have some form of management planning. It should be noted that a low management effectiveness score does not indicate that the situation is hopeless or that the protected area does not have high remaining values.

There was a very high appreciation among the landholders for the values and benefits of the protected areas (Figure 4.6), discussed in Box 4.2.

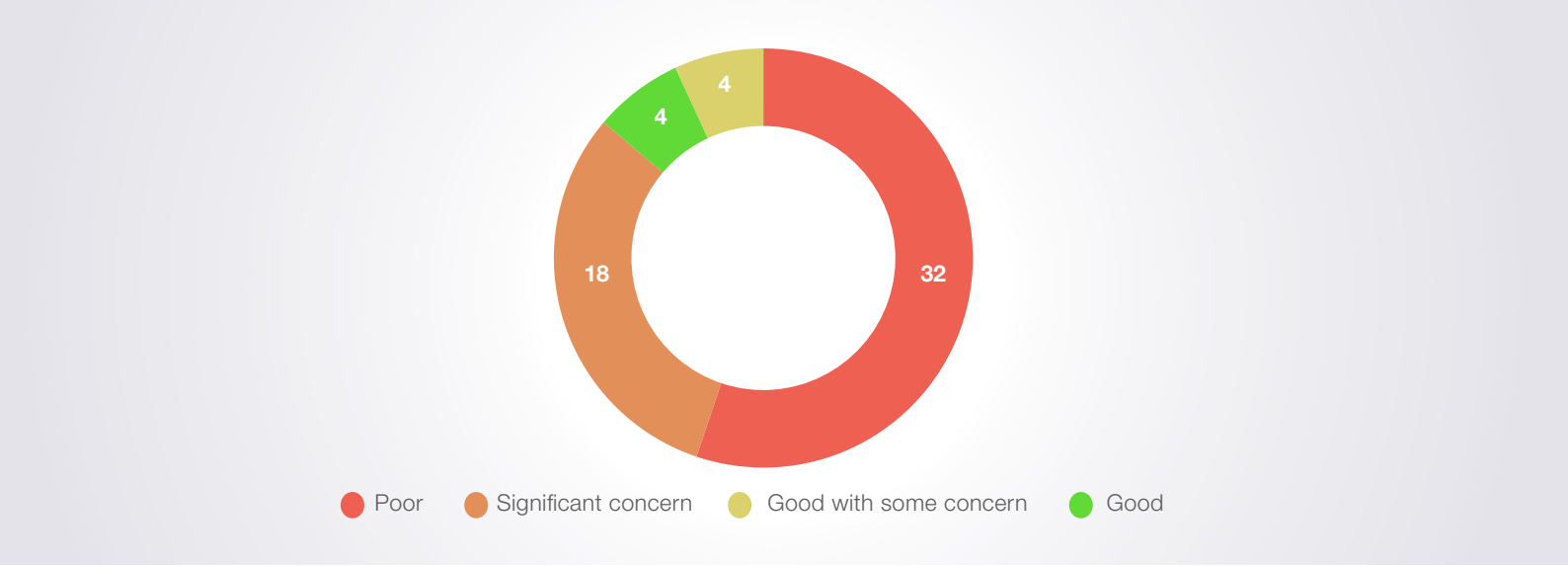


FIGURE 4.5 Overall progress in management effectiveness for protected areas in PNG (numbers of protected areas achieving each management effectiveness rating in 2016–2017)

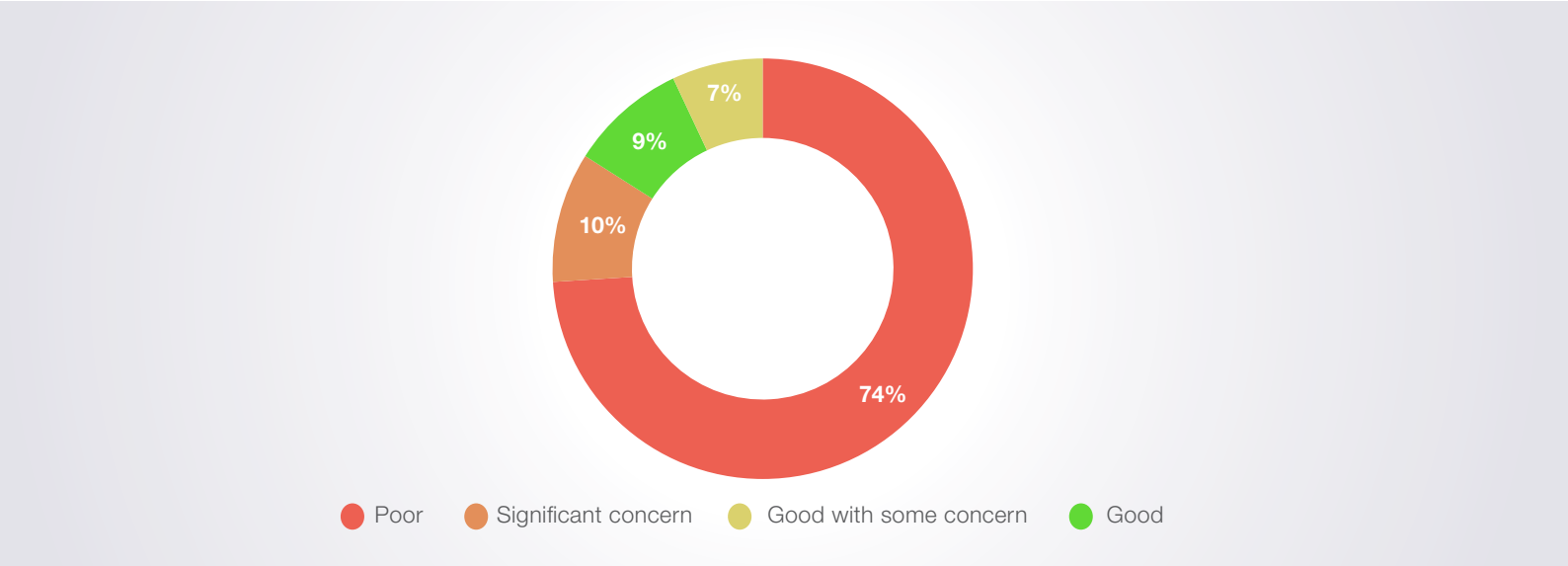


FIGURE 4.6 Overall benefits importance ratings for PNG protected areas (percentage of 58 assessed protected areas achieving each rating)

BOX 4.2 PROTECTED AREA VALUES AND BENEFITS IDENTIFIED THROUGH THE PNG-METT

Respondents for most of the protected areas had a very strong appreciation of the benefits of their protected areas, with attractive scenery, traditions and customs, potential future tourism, fresh water, and biodiversity scoring the highest across the country. With a few exceptions, most protected areas were highly valued by their customary landowners as places where nature is relatively intact and cultural connections still strong. Participants were enthusiastic about the values and benefits of their protected areas. However, customary landowners for a few protected areas had little understanding of why the protected area exists or what it meant, indicating the value of further contact with government or other conservation bodies.

My father came up with the idea of a Sanctuary and he convinced the members of the community. Logging companies were interested in the area, but we recognised the importance of the area for wildlife. We didn't want to have logging. We would have lost everything. We wanted to keep it protected for our children.

In the Sanctuary we have kwila trees, butterflies, herbal plants and national iconic species such as the bird of paradise and crocodile. There are python, scorpion and other unique species. There are no cassowaries (muruk) any more as they have been hunted. So we must protect what is left. It is important to have this place so that children can come here and learn about the environment. (Balek Wildlife Sanctuary)

The WMA is our 'mama graun' (mother earth). It has forest, kumuls (bird of paradise), tree kangaroos, cassowaries, pigs, lizards, wallabies and fresh water species such as fish, eels, turtles and prawns. There is diverse wildlife and several rare and threatened species. It has mountains, with caves and waterfalls. In the forest the soil is pushed up into mounds (gunategi) by insects. We form an association with mama graun. Our survival depends on this and we need to protect this land, the forest and the animals. We also want to extend the Wildlife Management Area so there is no more destruction of the forest. (Mojirau Wildlife Management Area)

The management effectiveness workshops listed the key values of each protected area and estimated the condition and trend of each value. More than two-thirds (71%) of protected areas estimated their values to be in 'Good' condition or 'Good with some concern'. However, when the size of these protected areas is considered, only 45% of the protected area network falls into these categories: the largest protected area in the country has some very significant threats and 53% of protected areas are experiencing decline in some important values.

There had been no systemic improvement in on-ground delivery since the RAPPAM management effectiveness study of 2006 (Chatterton et al., 2006). Across the country, customary landowners were pleading for assistance and support to look after their protected areas, and to develop meaningful employment and livelihood options based on stewardship and a close relationship with their lands and seas. Given the very high values and high levels of threats to these protected areas, it is critical for the national government and the international community to urgently find ways to deliver this support. The existing protected areas are a good starting point for creating the comprehensive, adequate, representative and relevant network to which the PNG government has committed (Independent State of Papua New Guinea, 2014), but a lot more work is needed to expand the network and to make it functional.

Customary landowners meet in Madang to discuss management effectiveness. (© Ann Peterson)

Since the management effectiveness study was finalised in 2017, efforts have continued to improve the effectiveness of management, with a focus on increasing capacity, and the METT information has been critical in setting priorities and in clearly demonstrating to both government and communities where efforts are needed. For example, the management effectiveness study showed the need for financial support for all protected areas, including those managed by communities, and this was critical in encouraging the government and stakeholders to seek funding from the GEF for a new project aimed at financial sustainability of protected areas in the future (Kay Kalim, pers. comm. 2021). Through this project,[20] a protected area finance and investment plan has been completed (Koch et al., 2021), and work is well underway to establish a Biodiversity and Climate Fund, which is hoped to dramatically change the trajectory of protected areas in the future. At the protected area level, progress has been slower, but information obtained through the METT has been used as the basis for preliminary management planning.[21] The evaluation process showed that communities felt neglected and wanted more communication and cooperation, and this has stimulated a much higher level of engagement among protected area stakeholders and between the communities and CEPA.

[20] CEPA/GEF/UNDP Project on Sustainable Financing of PNG's Protected Area Network

[21] Desktop management planning work has been completed for all protected areas, using METT data about current status, threats and values as the major source of information. Community-based planning work has been delayed due to COVID19.

4.7 Assessing the protected areas network of Palau

The Republic of Palau is an island nation in Micronesia. Palau is comprised of 487 islands, of which only seven are permanently inhabited. Palau is best known for its Rock Islands Southern Lagoon UNESCO World Heritage site, its remarkable marine environment and tropical moist forests, which are ranked second in the global top 20 ecoregions with highest conservation value for forest-dependent birds (Buchanan et al., 2011).

Palau is a democracy. The governance structure includes the national government with the executive, legislative and judicial branches and 16 state governments led by governors and state legislatures. Traditional chiefs provide advice to government at both national and state levels.

Land can be both privately and publicly owned, while from the high water mark out to 12 nautical miles are state territorial waters. The national government controls the waters beyond 12 miles. Palau's population of 20,000 people thrives in a natural environment that sustains subsistence and supports tourism as the primary industry.

In 1998, massive coral bleaching resulted in significant loss of corals, taking its toll on local fisheries and tourism. Nationwide coral mortality was estimated at 30%, with some areas experiencing up to 95% coral mortality (ReefBase, n.d.). The image of dead corals on the reef on a colossal scale alarmed Palauans. Palau's response to the bleaching event ignited the creation of the Protected Areas Network (PAN) to build resilience against future bleaching events. With the tradition of a *bul*[22] culture, the PAN policy framework is popularly supported by Palauans.

Rock Island Lagoon World Heritage Area (© Palau Conservation Society)

[22] '*Bul*' is traditional management by the village chief using temporary closures to resources for sustainability.

The PAN Act is an innovative policy with the aspiration of healthy biodiversity and people. It is a bottom-up framework funded by a green fee collected from visitors to Palau enabling the sustainable financing of the PAN. The green fee is managed by the PAN Fund, a non-government organisation, created by the PAN Act with fiduciary responsibilities over the green fee (Figure 4.7). Protected area sites in Palau belong to states. The states may nominate a site or sites into the PAN. Once a site has acquired membership of the PAN, a state becomes eligible to apply for sustainable financing to implement their management plans. Today, all of the states have member sites in the PAN (Figure 4.8).

Palau, along with the Commonwealth of the Northern Mariana Islands, Federated States of Micronesia, Guam and Republic of the Marshall Islands (RMI), committed to the Micronesia Challenge 2020. The goal of the challenge was to protect and *effectively conserve* 30% marine and 20% terrestrial areas by 2020. Attached to the goal is a Micronesia Challenge Endowment which aims for each jurisdiction to raise US$10 million for the endowment to contribute to effective management. Palau has exceeded its spatial commitment but is still building effective management of its protected areas. Palau has also met its commitment to the Micronesia Challenge Endowment made possible largely by the green fee.

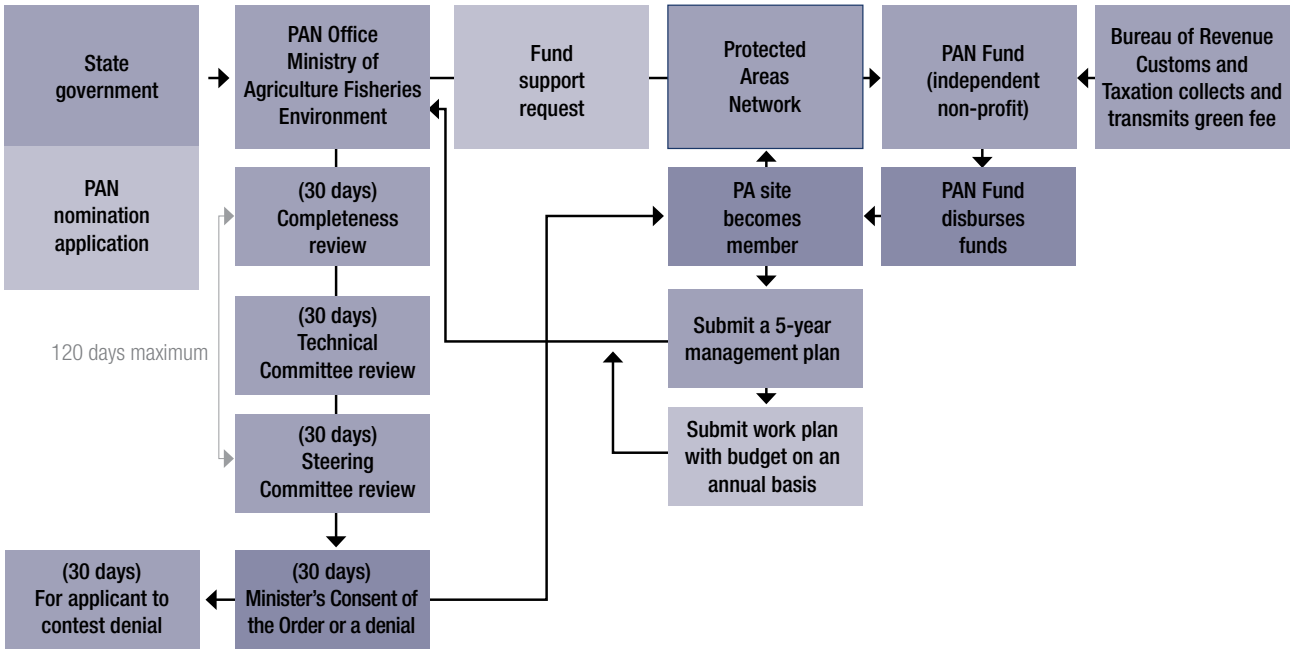


FIGURE 4.7 Structures and arrangements of Palau's Protected Areas Network (PAN)

Source: Palau Conservation Society (PCS) 2021

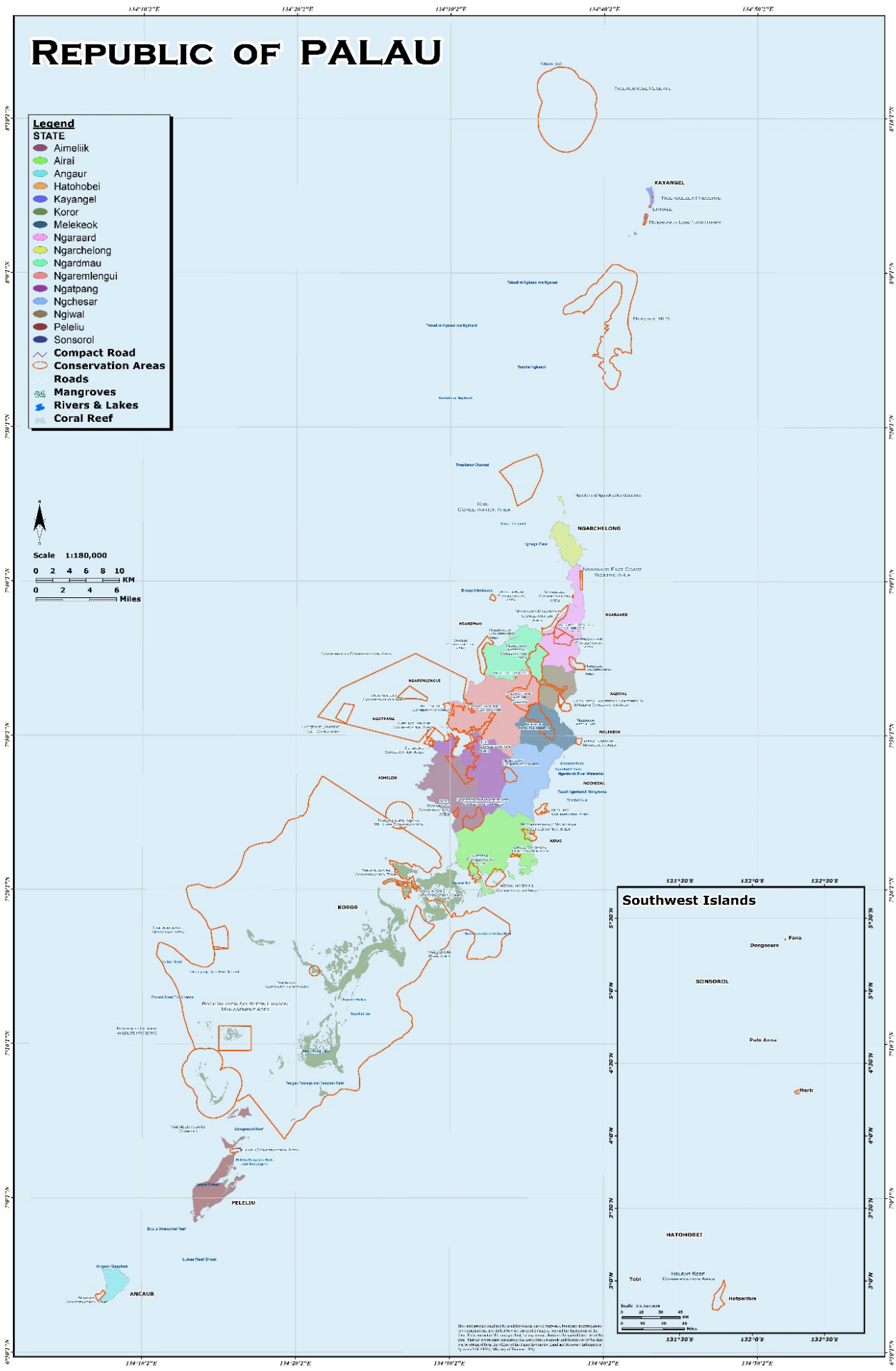


FIGURE 4.8 Palau Protected Area Network. *Source: Palau Automated Land and Resources Information System*

PAME ASSESSMENTS

The PAME assessment methodology was created from a marine protected areas management effectiveness scorecard developed by Carter et al. (2010) for Indonesia, adapted and tested in Palau and Micronesia. The adaptations were designed to build in local relevance, and to aid communities in developing a path to achieve their goals, inform management and direct investment. The result of this adaptation is the Micronesia Protected Area Management Effectiveness (PAME) assessment methodology used in Palau to evaluate PAN sites (Isechal et al., 2014).

A first network-wide PAME assessment was applied to the 26 protected area sites that were part of the PAN network in the period 2014–2015, using a custom designed assessment tool. The assessments were applied at varying levels, single site or single network at state levels. The assessments were carried out by a facilitation team made up of staff from the PAN Office and local partners and conducted with community representative groups and site management staff from respective states. Average scores across the sites are shown in Figure 4.9. The PAME results found every site was performing well in at least one of twelve management categories. Many of the sites showed 'Good' or 'Effective' implementation in Traditional knowledge, Planning, Stakeholder engagement and Staffing. But the same results also showed 50% of sites performed on average 'Poor' in Biophysical, Socio-economic, Legal, Infrastructure & equipment, Finance, Enforcement and Conservation effects[23] (PAN Office, 2016).

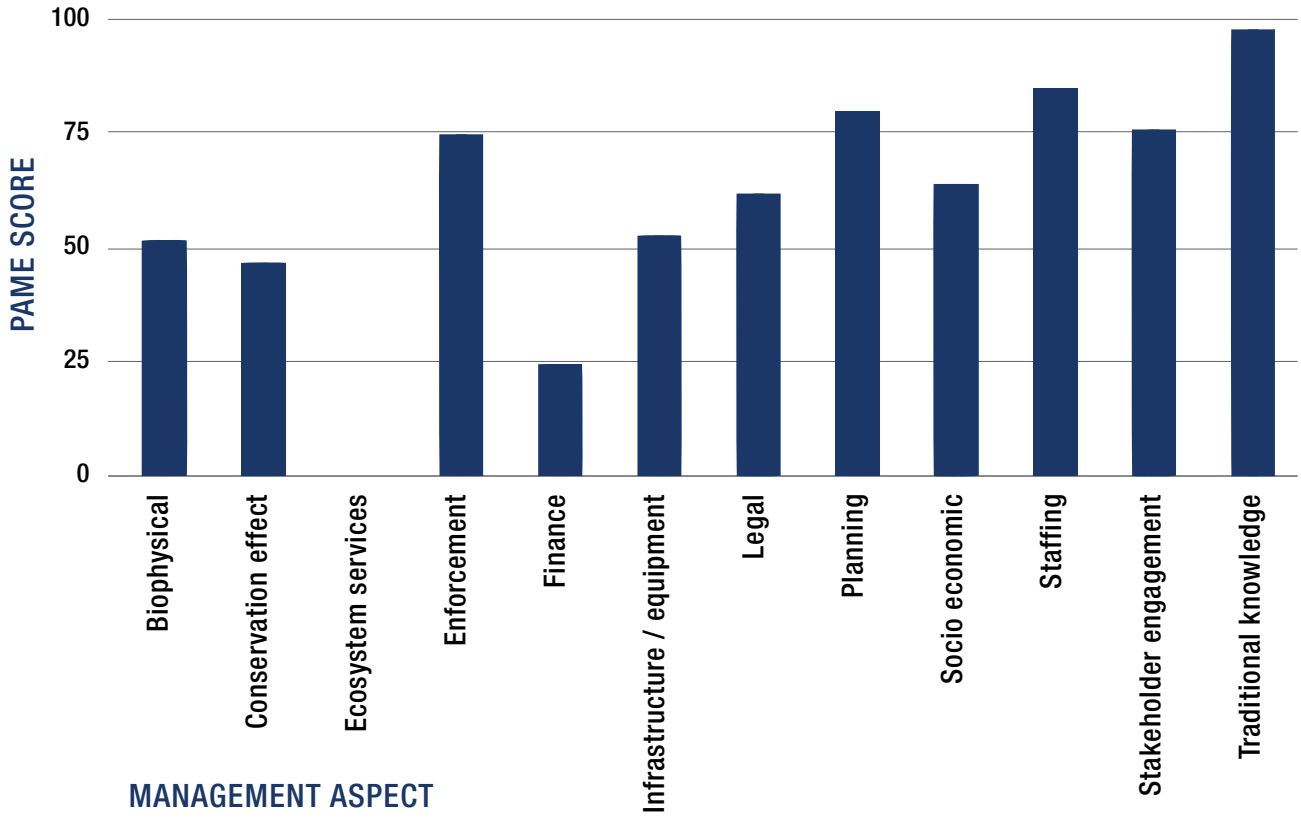


FIGURE 4.9 Average PAME scores (0–100) for each aspect of management in assessments carried out for Palau's 26 PAN sites from 2014–2015. *Source: PAN Office*

[23] However, it should be noted that the scoring system in this assessment methodology differs from most: <65% = 'Poor'; 65–75% = 'Adequate'; 76–85% = 'Fair'; 86–95% = 'Good'; > 95% = 'Effective'.

During the analysis, some areas of the PAME were found to display discrepancies in the assessment and there were various recommendations for improvement. Areas to improve included:

a) clarifying the definition of terms;

b) applying the assessment at individual site level;

c) improving the scoring system where anomalies were evident;

d) improving the appropriateness of questions;

e) building data and spreadsheet integrity;

f) training site managers and technical partners to understand the scorecard; and

g) building capacity to facilitate the assessment exercise and institutionalise management effectiveness assessments.

Since the network-wide assessment, revisions have been made to the Palau PAME. Out of 63 questions in the previous version, 21 of the questions were either revised or replaced with a different question.

The changes made so far enhance the appropriateness of the tool for local relevance and context in Palau. The other areas recommended for improvement will perhaps be achieved over time as the PAN Office with support from partners continues to build experience using the Palau PAME.

The adaptation of the Indonesia score card to suit the Micronesia region and the initial field testing of the resulting Palau PAME tool was piloted by the Palau International Coral Reef Centre with funding support from The Nature Conservancy (TNC) Micronesia Program. The development of a user guide to accompany the Palau PAME was supported by the Micronesia Conservation Trust. The Palau assessments have been carried out by the PAN Office, Palau Conservation Society and TNC supported through grants from the GEF SGP Country Program, Palau UNESCO and The Nature Conservancy.

BOX 4.3 EXAMPLE OF THE IMPACT OF THE PAN FUND

A major result arising from the investment of PAN Funds in 2017 was the mobilisation of Ngatpang's PAN Office. With an office in place and its Management Plan completed, the state is now better able to protect and effectively manage marine resources in its three PAN sites. In 2018, the PAN Fund disbursed the first tranche of funds to Ngatpang to implement its Management Plan.

Now that Ngatpang is receiving its PAN allocation, it can establish a baseline PAME score and then work on improving management where needed (PAN Fund Annual Report, 2017).

FUTURE OF THE PAME IN PALAU

The introduction, pilot and implementation of the Palau PAME tool in Palau have been mainly driven by Palau International Coral Reef Center, TNC, Palau Conservation Society and the PAN Office in support of the PAN. The consideration and implementation of the findings and recommendations lie with the PAN Office and the states to incorporate into the next iteration of planning.

The Ministry of Natural Resources, Environment and Tourism's PAN Status Report 2003–2015 in addressing composition gaps makes several recommendations, one of which is to "continue with the PAME Assessments until 100% of PAN Sites have been assessed. Ensure that all PAME Assessments are standardized…".

Using the PAME has been engaging for protected area communities and has proven to be meaningful for the PAN. A correlation is recognised where a state's cumulative PAN budget appears to positively influence the state's biophysical PAME scores. An example of the benefits of the PAN Fund is shown in Box 4.3. States with higher cumulative allocations from the PAN Fund between 2011 and 2015 have higher PAME scores in categories assessing natural resources. Similarly, states with more staff have higher biophysical PAME scores. All assessed PAN sites reported some sort of decrease in illegal or destructive activity. In 25 out of 26 assessed sites, conservation targets (species populations and ecosystem condition) were reported as stable or improving (PAN Office, 2016).

Some of the earlier findings from the PAME assessment have been:

- The opportunity provided by the PAN to move protected areas from paper parks to managed sites;
- The PAN and local site management have been able to catalyse actions that make way for local approaches in management using the results of the PAME;
- A pathway for improving management now exists that is participatory by nature; and
- PAME has been an effective way to recognise and apply traditional knowledge for planning in the local context, engaging stakeholders, and managing sites based on local communities.

While use of the tool is not mandatory, it has been accepted as a way to track progress in managing protected areas and one way to ensure a clear path towards effective management of PAN sites (see Box 4.3). With the PAME widely accepted by the Ministry, the PAN Fund, key NGO partners and communities, there is optimism that the tool will continue to be used and mainstreamed in the administration of PAN sites.

BOX 4.4 NATURAL AND MIXED WORLD HERITAGE SITES OF OCEANIA

Elena Osipova and Bastian Bertzky

With its significant cultural and biological diversity, Oceania has high potential for natural and especially mixed World Heritage; however, the small number of existing sites indicates that many countries in the region might be lacking capacities to fully use the potential of the World Heritage Convention for conservation of their cultural and natural heritage.

Natural World Heritage sites in Oceania are also facing a number of threats and conservation issues. The IUCN World Heritage Outlook (https://worldheritageoutlook.iucn.org/) – the only regular global assessment of conservation prospects for all natural World Heritage sites – allows the identification of key threats and common issues at regional scale. The results of the most recent IUCN World Heritage Outlook (Osipova et al., 2020) for the five natural and mixed sites in Oceania showed that, while three of them have a positive conservation outlook ('Good with some concerns'), the outlook is of 'Significant concern' for Henderson Island and 'Critical' for East Rennell.

In terms of specific threats, invasive species and climate change were most frequently assessed as high or very high current threats (each reported in four out of five sites). As for protection and management aspects, law enforcement (four sites), sustainable financing and monitoring (three sites each) were assessed as of concern in the majority of sites in the region.

Natural and mixed World Heritage sites in Oceania and their conservation outlook

State Party	Site name	Conservation outlook
France (New Caledonia)	Lagoons of New Caledonia:Reef Diversity and Associated Ecosystems	Good with some concerns
Kiribati	Phoenix Islands Protected Area	Good with some concerns
Palau	Rock Islands Southern Lagoon	Good with some concerns
UK (Pitcairn Islands)	Henderson Island	Significant concern
Solomon Islands	East Rennell	Critical

Source: Osipova et al., 2020

4.8 Assessing natural World Heritage sites – the World Heritage Outlook process

Natural World Heritage status attests to the significance of the values of the site in relation to the four natural criteria for World Heritage listing that represent Outstanding Universal Value (OUV). At the time of inscription, sites added to the list also need to demonstrate conditions of integrity that relate to the wholeness or intactness of the site, whether it is of sufficient size to represent all elements that make up OUV, and the extent of threats to the site. Sites also must have an adequate protection and management system to ensure that their values are safeguarded. However, the condition of values and the integrity of a site can change over time. Processes of periodic reporting, reactive monitoring and World Heritage in Danger listing exist as formal parts of the World Heritage system to monitor, report on and support improvements in management of these sites. The World Heritage Outlook process for natural World Heritage sites was developed to complement these processes through a regular assessment of the management and condition of all natural sites on a three-yearly cycle (Osipova et al., 2014).

In essence, the World Heritage Outlook constitutes an assessment of management effectiveness. It can be used to identify and promote sharing of good management practices between sites, track the status and condition of site values and identify the most significant issues and pressures affecting the sites. The process consists of a desk-based assessment of:

- Current state and trend in condition of values;
- The extent and severity of threats affecting those values; and
- The effectiveness of protection and management of the site (Osipova et al., 2014).

Based on this assessment, the Conservation Outlook of each site is categorised on a 4-point scale between 'Critical' and 'Good' (Figure 4.10).

The assessments are undertaken by people with extensive knowledge of each World Heritage site and in consultation with IUCN Commission members, IUCN Secretariat staff, stakeholders involved in the management of sites (including IUCN Member organisations, relevant government authorities, site managers, NGOs, community groups, international agencies) and researchers. Results of assessments of individual sites are available on the World Heritage Outlook website (https://worldheritageoutlook.iucn.org/) and a regional and global summary is published following each assessment. The most recent assessment was released in 2020 (Osipova et al., 2020).

The five natural World Heritage sites in the Oceania region (Figure 1.4) covered in this report were assessed in 2014, 2017 and 2020. Three sites were assessed in 2020 as 'Good with some concerns', one as 'Significant concern' and one as 'Critical' (see Box 4.4). Strengths and weaknesses in management across these sites are summarised in Section 4.9.

FIGURE 4.10 World Heritage Outlook rating system. *Source: Osipova et al. (2014)*

4.9 How effective is management of protected areas in Oceania?

Little information and data are available from formal management effectiveness studies in most countries and territories in the region. The two main detailed studies available – from PNG and Palau – appear to represent two very different scenarios, while the World Heritage Outlook assessments (see https://worldheritageoutlook.iucn.org/) vary across the sites. These three case studies provide us with some interesting insights into what approaches to management of protected and conserved area might work best in the region. Relevant information and insights from other chapters in this report have also been used to make general observations on effectiveness where appropriate.

4.9.1 GOOD GOVERNANCE

Legal and governance frameworks

The prominence of community ownership of land and water across the region can be seen as both a strength and a weakness in enabling effective management of protected areas. Community-based governance and management provide examples of great strength, as for example in the Locally-Managed Marine Areas (see Box 1.4). However, limitations on capacity (Section 5.5) and finance (Section 7.1) at community level constrain management effectiveness unless these communities are supported.

World Heritage

In the World Heritage sites, legal frameworks vary from clear and comprehensive arrangements to a lack of legal frameworks and confusion over the relative powers of national legislation and customary laws.

Papua New Guinea

In PNG, landowner rights are respected in legislation – PNG has pioneered models of community-based conservation in protected areas – but this has not been backed up by necessary support mechanisms and resources in most cases. Governance arrangements for most protected areas are not fully functional: in just over half of PNG's protected areas, management committees are active to some degree, including two with provincial government involvement in management. In about half the protected areas there is no active management structure. The legislation for Wildlife Management Areas does not provide full protection against development interests.

Palau

In Palau, the legal framework was good in almost all protected areas. A clear framework has been established through the PAN Act, but for several states the assessment showed that the legal framework for management was not adequate, especially in relation to illegal extractive activities. This is mainly attributed to the absence of rules and regulations to support the enforcement of enabling state laws of protected areas in the majority of the states. Every protected area scored 100% for questions relating to traditional involvement in the selection and management of protected areas.

Capacity for adaptive management

The model of community-based protected areas, which is widespread across the Pacific Islands of the Oceania region, has the advantage of making adaptive management capacity more easily achievable. For example, a community meeting can use local processes to change harvesting agreements or sanctions, and these can be implemented immediately. However, effective adaptive management does require such processes to be clearly thought out, and for evidence and reflection to be incorporated into decision-making.

Papua New Guinea

In PNG, the Yopno Uruwa Som (YUS) Community Conservation Area[24] is a leader in adaptive management, with management based on active adaptive management processes, including the gathering of information through the Spatial Monitoring and Reporting Tool (SMART) (see Box 4.5) and rigorous scientific studies incorporated into management decisions. However, most protected areas have no formal capacity in this regard.

Palau

The PAME process in Palau has set up a framework for adaptive management, with a requirement to monitor and report on the achievement of targets from management plans. This process is scored as part of the 'conservation effectiveness' group and the assessment showed in a number of places there was good information over time about the trend and condition of management targets.

SMART training in PNG (© Paul van Nimwegen/IUCN)

[24] For information about management of this protected area, see https://www.zoo.org/tkcp/managingyus

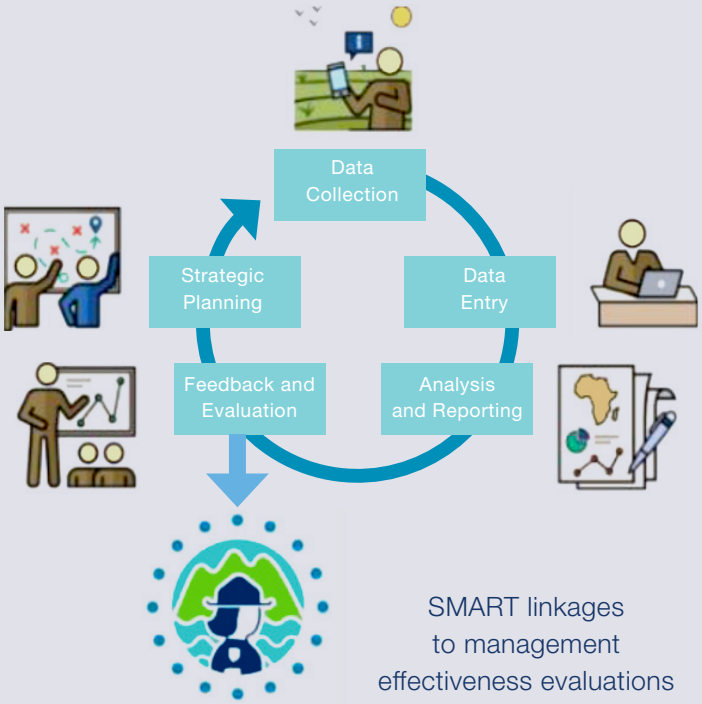
BOX 4.5 SPATIAL MONITORING AND REPORTING TOOL (SMART)

Anthony Dancer and Paul van Nimwegen

The Spatial Monitoring and Reporting Tool is one of the most widely used management support platforms for area-based conservation, with deployments in over 800 terrestrial and marine sites. It is a free and simple to use integrated system of desktop, cloud-based and mobile software, which enables standardised data collection by field staff on wildlife sightings, threats and compliance responses. This data can then be analysed and used to create maps and reports. The SMART Partnership[26] also provides capacity-building services and support. Importantly, SMART can support practitioners to evaluate and adapt conservation strategies and patrol plans, allowing better use of available resources and improved management outcomes (see figure below). The outputs of SMART can also provide a quantitative source of evidence when assessing management effectiveness (including METT – see Box 4.1) or to inform broader decision-making.

Within the Oceania region, only a couple of sites in PNG are currently using SMART. In March 2017, community rangers engaged through the Tree Kangaroo Conservation Program (TKCP) commenced using the tool in Yopno Uruwa Som (YUS) Conservation Area. The system has been fully adapted based on feedback from field staff and translated to Tok Pidgin. There are now 18 terrestrial and marine rangers patrolling the Conservation Area using SMART. As noted by Nicholas Wari (former TKCP Research and Conservation Coordinator), "SMART has allowed the Conservation Area to monitor community ranger efforts, wildlife sightings and understand potential threats. We use this information to support the development of our six-monthly work plans, update landowners and report to donors". Similarly, community rangers from the Tenkile Conservation Alliance commenced using the tool in the proposed Torricelli Mountain Range Conservation Area in December 2019. Looking ahead, further sites in PNG and Fiji plan to adopt the system.

Further information on improving the quality of METT assessments using SMART is available in the METT Handbook (Chapter 6), available at: https://www.protectedplanet.net/en/thematic-areas/protected-areas-management-effectiveness-pame?tab=METT.



SMART linkages to management effectiveness evaluations

[25] https://smartconservationtools.org/

[26] SMART Partnership developed and maintained the system. The members of the partnership are: Frankfurt Zoological Society, Global Wildlife Conservation, North Carolina Zoo, Panthera, Peace Parks Foundation, Wildlife Conservation Society, Wildlife Protection Solutions, World Wild Fund for Nature and Zoological Society of London.

4.9.2 SOUND PLANNING AND DESIGN

INFORMATION

The PAME process itself plays an important role in compiling information: for example, in PNG, METT information has provided a good basis for management planning. Generally, internet-based systems still have limitations in this region due to the expense of internet, slow internet speeds and the lack of government facilities. The BIOPAMA project (Box 1.1) and Pacific Island Protected Area Portal (PIPAP https://pipap.sprep.org/) managed by SPREP provide regional mechanisms for compiling and sharing information.

World Heritage

Information is good in all cases in relation to World Heritage values, which are well documented through World Heritage listing, but knowledge of other biodiversity and cultural values is a limitation at one site (East Rennell).

Papua New Guinea

In PNG, the PAME study (and the previous RAPPAM study) worked to consistently record key values for all protected areas according to available knowledge, but the underlying information is patchy. While people in most cases have a good general knowledge of their environment, the availability of detailed information about species abundance and patterns for protected areas is often poor.

Palau

Palau's protected areas in the PAN network have clearly defined values and a methodology set up to track their condition and progress.

UNDERSTANDING THE COMMUNITY CONTEXT OF SITES

Understanding the local social and economic contexts was generally very high in all the PAME studies, as might be expected where communities are very closely associated with protected areas.

World Heritage

In World Heritage sites this understanding is supported by strong community cohesion and traditional value systems, but shifts to the cash economy and adjacent development is impacting one of the sites (East Rennell).

Papua New Guinea

In PNG, the social and economic context is well understood by the communities that manage the sites. This understanding is reflected in management, as it is largely undertaken by customary landowners with a focus on maintaining traditional sites and practices.

Palau

In Palau, scores for socio-economic considerations were very variable, with some areas requiring socio-economic monitoring and others requiring better incorporation of this information into management. However, more than half the states showed good progress.

UNDERSTANDING OF THREATS

Protected and conserved areas in Oceania are subject to the same suite of threats and pressures that impact on conservation areas worldwide with habitat loss, over-exploitation, invasive species and climate change prominent amongst them (Section 1.6). As community lives are closely reliant on nature, the level of awareness of threats such as climate change and loss of culture are very well understood and cause great concern in communities.

World Heritage

World Heritage processes have meant that threats to values are well understood in those properties. The most common threats that are having a high or very high impact on values across the sites are climate change (4 sites), invasive alien species (4 sites) and overfishing/harvesting (2 sites).

Papua New Guinea

In PNG, the PAME study found that the level of community awareness of some threats is high and quite sophisticated due to the close connection of people with their land and water (for example, climate change, pollution, over-hunting, and pests that impact on their livelihoods). They were also highly aware of the threats to their local languages, dance and traditions that comprise their cultural heritage.

Palau

Threat analysis is not a major component of the Palau PAME study, though information has been collected as part of the analysis of condition and trend.

Erosion due to logging in Mamberamo, Papua New Guinea. (© Intu Boedhihartono /IUCN)

DESIGN

As discussed in Section 1.6, most individual protected and conserved areas in Oceania are not large enough to address the scale of pressures that impact on them and comprehensive threat mitigation therefore requires integrated management across tenures and sectors. Such integrated ecosystem-based management is prominent in Oceania for example through the various ridge to reef projects (e.g. Mcleod et al., 2019; The Pacific Ridge to Reef programme[27])

World Heritage

Two of the three World Heritage sites are large and able to conserve values over the long term with appropriate management. One site is smaller and insufficient to ensure the long-term survival of some of its values. It should be noted that while work is continuing to establish large and connected MPAs, there is evidence that even small community-based Locally-Managed Marine Areas can be effective for fish recovery if they are in the right place and are well enforced (e.g. Cinner et al., 2006).

Papua New Guinea

About three-quarters of protected areas in PNG reported that design did not impede management; in other cases, the protected area is too small or is surrounded by development.

Palau

The PAME studies have highlighted design issues for some sites. For example, the Ngelukes MPA in Ngchesar has been monitored every two years. Each time, the site has not demonstrated improvements. Findings from the Palau International Coral Reef Center show the site is too small to be effective. Recommendations to expand the site have been reported and presented to the state government but the community is not ready to expand the site – the negotiation process can take months, or even years.

4.9.3 EFFECTIVE MANAGEMENT

Capacity weaknesses and lack of management resources are a major impediment to effective management of protected and conserved areas (Chapter 5) in the region, although this is partially offset by the strong culture of stewardship across Oceania (Section 1.3, Chapter 5).

World Heritage

All World Heritage sites have a management plan or documented management arrangements.

Papua New Guinea

At the time of assessment, about half of PNG's protected areas had some form of management plan, but most are very out of date and/or are not available to landowners. Most protected areas have no work plan. Customary landowners in the PAME process were very keen to have management plans, and saw these as the basis for going forward with management on a more positive and consistent basis.[28]

Palau

In Palau, all sites scored in the 'Good' range, and most over 80% in the questions relating to planning and the implementation of management planning.

[27] https://www.pacific-r2r.org/

[28] Information about values, threats and the community vision, gathered in the METT study, has now been used to begin the management planning process for all protected areas, with a planning approach based on the Open Standards methodology (Conservation Measures Partnership, 2020).

BUDGETS, STAFF AND EQUIPMENT

Relatively low levels of government resourcing and a predominance of community-based management mean that provision of funds, staff and equipment across the region are generally very low (Section 3.4.4; Chapter 7).

World Heritage

In World Heritage sites, the implementation is very variable, but resourcing constraints apply to varying extents in all sites. In one case, studies indicate that the management plan for the site was not resourced and hence not implemented (East Rennell). Lack of staff/people and equipment to manage the areas is an issue for two of the World Heritage sites (East Rennell, Phoenix Islands), but is acceptable in Rock Island Southern Lagoon where tourism revenues support a strong management system and in Lagoons of New Caledonia and Henderson Island. In one case, a lack of any sustainable financing is negatively impacting on site management (East Rennell). The need for staff training is an issue at all sites and a number of initiatives are underway to strengthen this.

Papua New Guinea

In PNG, implementation of management is very poor except in a few externally-funded protected areas. Only 20% of protected areas have any paid staff, and this was recognised as being a major impediment to management. However, in many places voluntary work is undertaken by customary landowners – about half the protected areas recorded that this works well. Training and skills are low or non-existent in almost three-quarters of the protected areas.

Sustainable financing is absent from almost all protected areas assessed in PNG, with 80% reporting that there is no annual budget to manage the protected area. Most protected areas have no budget security into the future. Again with a few notable exceptions, most protected areas have no infrastructure or equipment and lack even the most basic tools for management. Lack of transport and difficult access impedes the ability to reach many areas on both land and sea. The 'good news stories' in PNG include the YUS Community Conservation Area, which has a sustainable income stream from an endowment fund, which enables it to undertake long-term activities with confidence.

Palau

By contrast, the Palau PAN has sustainable funding through the green fee, meaning there is reliable income for all protected areas. To support this network, the conservation sector has grown over this decade from a handful of people working in NGOs to over 100 conservation professionals. The 'staffing' indicator scored in the 'Good' range for all protected areas, reflecting the employment of protected area staff by the state governments. However, the assessment summary notes less than optimal staffing levels for several states, which also tended to be the weakest in other areas.

The financing and infrastructure questions scored lower than any other indicators in the surveys. Only two are over 50% with most scoring in the 'Poor' or 'Significant concern' range. This may reflect quite detailed questions about sustainable finance plans, as it seems that most areas were functioning with at least basic budget and equipment. From 2012–2015, sustainable financing from PAN supported on average US$90,000 in protected area expenditures for each state (PAN Status Report 2003–2015).

Across Oceania, we know that much of this work is undertaken by community members, often with little support from governments. Traditional management of natural and cultural resources has been effective in the past but it is more difficult for communities to adequately respond to the pressures emerging from climate change, invasive species, development interests and increasing populations. It is clear that management of these issues requires additional support.

World Heritage

In World Heritage sites, this is variable – two sites are remote and not subject to pressure from adjacent populations or heavy visitation (Phoenix Island, Henderson Island), while one is subject to high tourism pressure but has relatively strong governance and management systems (Rock Islands Southern Lagoon). Lagoons of New Caledonia and East Rennell have relatively little tourism pressure, but East Rennell is facing considerable pressures arising from changing social and economic demands from adjacent developments and a shift to a cash economy.

Papua New Guinea

In PNG, only one in five protected areas undertake threat abatement activities and conduct routine maintenance. Fewer than half of the protected areas reported any resource management activities, and for most areas any activities undertaken are by community volunteers. Hunting, fishing and shifting agriculture, while sustainable several generations ago, are now recognised by many communities as unsustainable due to higher populations and the need for cash incomes. Major efforts are needed to restore sustainable resource management systems.

Palau

Although protected areas in Palau vary significantly in sizes and key features, results from the 2014 PAME show climate change, invasive species, overharvesting, poaching and unsustainable development are the top threats to protected areas at the network level. The responses to these threats are shared between the national government and states. Palau's Sustainable Land Management Policy and Climate Change Policy are in place to provide umbrella frameworks for states to develop their land use plans and adaptation plans. Some states have completed plans, while others are seeking to develop their plans. Comprehensive fisheries laws, regulations, and management plans have been developed for two states, while two other states are actively engaged in a project to develop their fisheries laws. Invasive species surveying and removal response activities are actively implemented in the majority of the mainly terrestrial sites in Babeldaob, and supported by NGOs and the Bureau of Agriculture.

LAW ENFORCEMENT AND CONTROL OF ACCESS

Again, the data shows that community-based law enforcement is facing new threats with commercial and development pressures. Lack of ability to control external interests who want to exploit protected areas is a common theme across the three case studies

World Heritage

In the latest World Heritage Outlook assessments, all sites report 'Some concern' with law enforcement except for Henderson Island where enforcement is neither possible nor needed because of the remoteness of the site. Commercial fishing is prohibited across one of the sites (Phoenix Islands), and subsistence fishing is relatively well managed at two of the sites (Lagoons of New Caledonia and Rock Islands Southern Lagoon). The lack of resources to implement the management strategy means that resource use is largely uncontrolled at East Rennell.

Papua New Guinea

In PNG, only two areas reported very good progress in relation to law enforcement. In most protected areas, lack of effective protections systems and law enforcement was recognised as a major issue. This is at several scales. Firstly, large companies are able to encroach onto protected areas, creating impacts from logging, agriculture, mining, pollution and commercial fishing. Secondly, outside settlers encroach into protected areas and do not follow traditional rules and sanctions. Thirdly, people within the communities do not always follow the laws when they see there is no enforcement. Respondents at the PAME workshops expressed frustration about their inability to prevent incursions.

Palau

In Palau, the assessment includes five enforcement questions reflecting high expectations. One state scored 39%, but most were in the 'Some concern' or 'Good' range. For a number of states, the lack of ability to control extractive activities, especially in no-take zones, was highlighted as being a major issue. Signage and clear boundaries were mentioned as partial solutions, as well as better planned enforcement capacity. The absence of rules and regulations for protected areas remains a fundamental hindrance to enforcement of protected areas rules, along with the prohibitive cost of retaining legal services and prosecution of violations.

East Rennell, Solomon Islands (© Paul Dingwall)

VISITOR AND TOURISM MANAGEMENT

Many protected areas in the region have great potential for ecotourism and for generation of funds through these activities. Some areas in the case studies have already been successful in promoting this potential, managing impacts and generating income, while in other places the development of systems is in its infancy.

World Heritage

Tourism is a high threat at Rock Island Southern Lagoon but also provides revenue that is enabling strengthening of the management system. The considerable tourism industry based here is generally well managed although there is some evidence of impacts at heavily used dive sites. In contrast, the local community of East Rennell urgently requires income generation initiatives, including tourism, as an economic incentive to continue to prohibit logging and mining of the area.

Papua New Guinea

Visitor facilities and services are absent in almost three-quarters of the protected areas surveyed in PNG. Some protected areas reported no visitors and some are not seeking to promote tourism, but many see this as a potential source of income and employment, and are keen for assistance to develop eco-tourism.

Palau

Palau's tourism is concentrated in the Rock Islands Southern Lagoon World Heritage site in the state of Koror. The state's Department of Conservation and Law Enforcement manages the area at all times. The collection of the Rock Island Use Fee by the state amasses a significant income to sustain management of the area. The state administers a tour guide certification programme, tour operations guidelines, engages in the Green Fins Management Approach for marine tourism and is developing a cultural and nature-based tourism programme to enhance tourism experience. Other states are moving to develop their protected areas to accommodate eco-tourism activities but still lack basic amenities to accommodate visitors.

The rich culture of the highlands of Papua New Guinea (© Bob Brewer/Unsplash)

4.9.4 SUCCESSFUL CONSERVATION OUTCOMES

Useful data on conservation outcomes in the region is limited, but in general it is probable that the good condition of values is threatened, and in many cases, declines are already being observed. The exceptions are in places like Palau and some protected areas in PNG, where active intervention and effective management is indicating stabilisation or improvement in condition.

World Heritage

The condition of the values of World Heritage sites in New Caledonia, Kiribati and Palau are assessed as being 'Good with some concern' (Osipova et al., 2020). All sites play an important role in supporting local culture and tradition except for Henderson Island which has no resident population. However, there is high concern over the status and trend in values at East Rennell due to the very high level of threat and a lack of current information on the condition of values. Lack of monitoring means that information is not available on the status of some values in the World Heritage site. There is also high concern for the status and trend of values on Henderson Island as a result of the impact of rat predation and competition on avifauna and other biota. Climate change is having an impact on coral reefs across the region.

Papua New Guinea

In PNG, assessments in 73% of protected areas (by number) estimated the condition of values to be 'Good' to 'Very good', though just over half indicate some important values are declining. By area, only 45% of protected areas report 'Very good' to 'Good' condition. Reference to remote sensing imagery indicated that community estimates of condition generally correlate well with observed clearing, though this does not mean biodiversity loss is not occurring at a finer scale. There is a high degree of concern about the loss of cultural and traditional values in many protected areas.

Palau

Information about conservation effectiveness (condition) has not been compiled for all the protected areas on Palau, but the trend has been assessed for each value. It appears that the majority of values across the protected areas were rated as 'Good' and 'Fair'. A few are mentioned as 'Poor' in some places, including seagrass at one site and coral at another.

4.10 Conclusion

Only a minority of protected and conserved areas in Oceania have been assessed using PAME tools (17%). Most of the available assessments are from two countries or World Heritage sites, making it difficult to draw conclusions on the status of effectiveness across the whole region. However, the case-studies presented in this chapter confirm the findings that the level of management is highly variable. This is supported by the broader literature and anecdotal evidence from the field. A key challenge is finding solutions that will increase effectiveness of management within the particular community context and governance arrangements. Bridging the gap between intention in policy and legislation and reality on the ground is a significant challenge in many places, as is illustrated, for example, in the low effectiveness of most protected areas in PNG.

A lack of adequate resourcing to support effective management is also evident across much of the region, resulting in major deficiencies in staffing, equipment and training. While local communities are often prepared to support protected areas and, in many cases, to take the lead, they cannot bear all the costs and responsibilities alone. The results of PAME studies could support the development of updated and more relevant management plans for protected areas in the region, with many sites currently lacking relevant, up-to-date plans. This is already underway in PNG.

Palau's success in establishing a functioning protected area network that is developing its capacity for effective management is an inspiration for other countries in the region. Underlying the success are: a high level of commitment by and capacity of the national and state governments; a working sustainable financing system that delivers to protected areas on the ground; a high level of collaboration with communities and stakeholders; committed NGOs that see their role as supporting the initiative 'from behind', rather than following their own agendas; and a commitment to undertake and respond to management effectiveness assessments.

A commitment to conduct management effectiveness studies is evident in other countries in Oceania and some studies are currently underway with the support of BIOPAMA and through other initiatives such as GEF-funded projects. But undertaking such studies is only the first step, action in response to the findings is needed to make real change on the ground. PNG's management effectiveness study makes many recommendations for improving effectiveness, based on the requests and statements of management committees across the country.

In committing to undertake PAME studies, all participants (government, managers, communities, NGOs and donors) need to ensure that the assessment method they select is fit for the context where it will be applied. This means ensuring that:

- Relevant rightsholders and stakeholders have opportunities to participate;
- The methodology selected is not too demanding of time and resources relative to the capacity of the sites to participate;
- The PAME system sits within a planning and management framework that will encourage response to the findings of the assessment; and
- There is a commitment to repeating assessments over time and using the results of assessments to revise plans, strategies and actions as part of an adaptive approach to the management of protected areas.

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CHAPTER 5

MANAGEMENT CAPACITY

Tailored training in Biodiversity Conservation and Protected Area Management conducted by the Forestry Training Centre, Fiji (© Lea M. Scherl)

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MANAGEMENT CAPACITY

CHAPTER 5

Management capacity

5.1 Introduction

Strong stewardship of nature is an intrinsic part of the culture of people in Oceania. Within this context, many very capable and motivated people work in protected and conserved area management. However, there remain significant weaknesses at the institutional and individual levels (Scherl & O'Keefe, 2016).

Lack of capacity is likely to be a major impediment to establishing and effectively managing protected areas. For example, in Timor-Leste, limited human resources and capacity have constrained progress towards establishing a national protected area system (GEF, 2017). Capacity development and learning in Oceania is part of a suite of initiatives needed to strengthen management effectiveness (e.g. Jupiter et al., 2014); and also identified as such, for instance, in Papua New Guinea (Leverington et al., 2017).

For capacity development to support effective management (e.g. Geldmann et al., 2018; Gill et al., 2017), working together is critical in a "process through which individuals, organizations and societies obtain, strengthen and maintain the capabilities to set and achieve their own development objectives over time" (UNDP, 2009, p.5). This has been recognised in regional and national policy documents in island countries of Oceania for quite a while. In the *Framework for Nature Conservation and Protected Areas in the Pacific Islands Region 2014–2020,* regional partners committed to "build capacity and partnerships that strengthen synergies between science, policy and local and indigenous knowledge systems, and between local and international agreements" (SPREP, 2014, p.4). The most recently developed Framework 2021–2025 (endorsed by the participants of the 10th virtual Pacific Islands Conference on Nature Conservation and Protected Areas, November 2020) also re-iterates "growing capacity" as one of its strategic objectives (#6) and as one of its principles (#7): "Increasing national, sub-national and community capacity to design, prioritise, direct, manage, implement, monitor and evaluate conservation programmes" (SPREP, 2020).

National Biodiversity Strategies and Action Plans (NBSAPs) across the region are clear about the need for capacity development, with some countries specifically having objectives around capacity building such as Nauru (Government of the Republic of Nauru, 2018), Fiji (Government of Fiji, 2017), Kiribati (Government of Kiribati, 2016), the Republic of Palau (Government of the Republic of Palau, 2016), Samoa (Government of Samoa, 2015) and Timor-Leste (Democratic Republic of Timor-Leste, 2011). Capacity building also features as a need in documents such as the Papua New Guinea Government Protected Areas Policy (Independent State of Papua New Guinea, 2014, p.48) which recognises the critical role of the diverse protected area workforce and their need for skills, commitment and resources. The Federated States of Micronesia State of Environment Report (SPREP, 2019) highlights the need for technical knowledge, skills and capability to conserve, manage and sustainably use all biodiversity within the nation.

A Regional Capacity Development Strategy (2015–2020) was developed for the Pacific Islands with a five-year objective to: "strengthen, broaden, and foster collaboration for long-term and sustainable capacity development opportunities, programs, and products for protected and other conserved areas in the Pacific Islands region, providing a foundation that will assist more effective, efficient, just, and equitable management of all those areas" (Scherl & O'Keefe, 2016, p.13). The strategy was developed through an extensive process of

gathering opinions and technical inputs from many stakeholders, within the auspices of the Pacific Islands Roundtable for Nature Conservation and is still relevant today. Many elements of that strategy and the outcomes reflecting those consultation processes are summarised in this chapter, with updated information where relevant.

We first briefly highlight the global work of the IUCN World Commission on Protected Areas (WCPA) in relation to capacity development. Next we analyse the current situation in the region, presenting examples of recent and ongoing capacity development initiatives. This analysis includes the groups that need to be involved, the capacities and competences needed, modalities and best approaches for capacity development, and implementation challenges. The Conclusion contains recommendations to guide more immediate actions and strengthen management capacity for protected and conserved areas in Oceania.

5.1.1 THE IUCN STRATEGIC FRAMEWORK FOR CAPACITY DEVELOPMENT

The IUCN World Commission on Protected Areas' (WCPA) Strategic Framework for Capacity Development provides an overview of the main issues and challenges related to capacity within protected areas globally, and a set of directions and priorities for future action (IUCN, 2015) (see Box 5.1). The framework highlights many aspects that are relevant to the Oceania region, and these are addressed throughout this chapter.

BOX 5.1 THE IUCN STRATEGIC FRAMEWORK FOR CAPACITY DEVELOPMENT IN PROTECTED AREAS AND OTHER CONSERVED TERRITORIES 2015–2025

This framework presents four strategic programmes for implementation:

- **Promoting professionalisation** – Protected and conserved area management should be recognised as a distinct and multidisciplinary profession with four main aspects being focused on: competency-based approaches, promoting leadership, building professional organisations and improving working conditions.
- **Indigenous peoples and local communities** – They play a vital role in managing and supporting conservation in many parts of the world (including Oceania) and capacity development initiatives should be adapted and respond to their specific needs.
- **Enabling capacity development** – Major barriers still exist for many protected area practitioners to access capacity development opportunities. These barriers include over-reliance on project-driven training and the high cost of university courses; thus there is a need for resourcing and supporting accessible, affordable and high quality capacity development strategic pathways.
- **Evaluating capacity development** – There is currently no widely accepted or applied mechanism to measure the impacts of capacity development initiatives. An evidence-based approach to capacity development would improve planning and outcomes.

GOAL

Protected and conserved areas across the world are effectively, efficiently, and equitably managed and governed, using state of the art skills, knowledge and best practices.

Programme 1. Promoting professionalisation
Protected area management is widely recognised as a distinct profession,with its own standards, systems and tools.

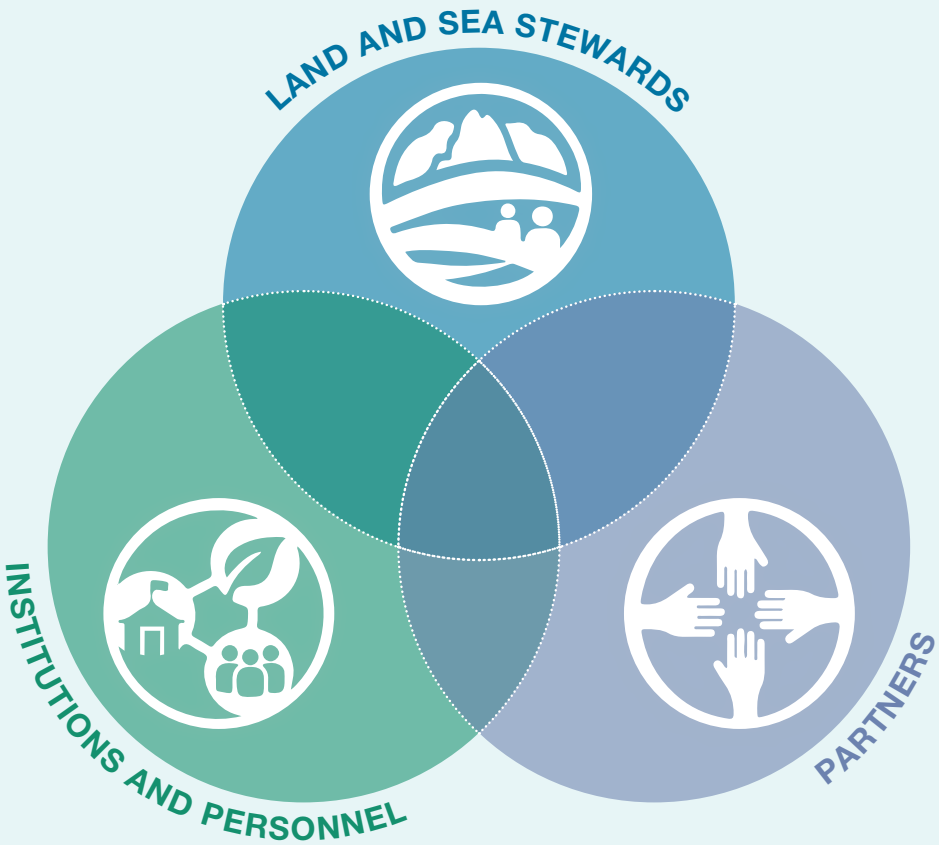
Programme 2. Supporting indigenous peoples and local communities
Capacity development initiatives include and address the specific needs ofindigenous, traditional, and community stewards.

Programme 3. Enabling capacity development
Resources, support and learning opportunities are available to implementthe strategic framework for capacity development.

Programme 4. Measuring and assessing the impacts
Effectiveness and impact of capacity development is being measured and assessed.

5.2 Participating groups

In Oceania, management of protected and conserved areas is usually a shared responsibility, and capacity development must be shared across groups of land and sea stewards, management institutions and personnel, and other partners (Figure 5.1). These groups often overlap and interact through their roles as planners, implementers and partners and they mutually influence each other to deliver conservation outcomes.



LAND AND SEA STEWARDS: a wide range of indigenous peoples and local communities, and sometimes other organisations who own, manage or co-manage protected and conserved areas.

INSTITUTIONS AND PERSONNEL: government and non-government organisations and individuals who have formal roles in managing protected areas, or have significant duties that affect protected areas.

PARTNERS: organisations and individuals whose policies, decisions, attitudes and activities are particularly instrumental and influential in capacity development and management of protected and conserved areas.

FIGURE 5.1 Groups needed to participate in capacity development in Oceania.
Source: Scherl and O'Keefe (2016)

Better outcomes are achieved when participating groups gain the capacity to work effectively together, and shared capacity development programmes and activities can help create stronger relationships and enhance understanding. A good example of this was establishing the Lake Letas Community Conservation Area *by the communities of Gaua Island, Vanuatu. After a capacity and competence needs analysis with communities,* in the words of key stakeholder, Rudolf Hahn (pers. comm.):

A local, national, regional multidisciplinary team of experts and knowledge holders from forest, environment, cultural, tourism and geology and mines departments, provincial governments and rural communities worked together to strengthen environmental awareness and to improve everyone's capacity with workshops tailored for specific objectives. This included the identification of biodiversity hotspots, ecosystem services and threats, socio-economic assessments, the identification of the protected area, its survey, mapping and boundary demarcation and the development of the governance structure, management plans and eco-tourism products. With the support of a range of partners here, Lake Letas, the largest freshwater lake in the Pacific Island region, was declared as Vanuatu's first Ramsar wetland area and its Mt Gharat, an active volcano with hot springs, was declared as a national Geopark. The training was essential to prepare the management plans and equip partners with the capacity for continuous management.

Local conservation stewards in Vanuatu at a planning meeting for the establishment of a protected area (© Rudolph Hahn)

5.3 Capacity and competency needs

The capacity of the participating groups is usually assessed at the project or programme level, and the required training of personnel is built into work plans. Ongoing capacity development through institutional programmes for protected area management within governments and NGOs does occur. For example, GEF projects in the region include elements of capacity development based on needs assessments of participating groups (e.g. FAO, 2017; Scherl & Hahn, 2017). This often happens because the stakeholders involved in the development of proposals identify that such assessments are needed. However, there is limited exchange of this information outside of project reports and to date there has been no synthesis that explores the current status of protected area-related capacity at the regional level.

Some recent examples of capacity assessments at the national level in Oceania exist. In Fiji, the Ministry of Forests conducted such a process to support greater ministerial emphasis on biodiversity conservation and to develop a vocational training programme for stakeholders involved in the forest and other natural resource management sectors (FAO, 2017). In Papua New Guinea, a capacity needs assessment was conducted for personnel of the Conservation and Environment Protection Authority and used as the basis for learning plans and a future capacity development programme (Peterson et al., 2019). A number of countries' Action Plans to implement the CBD Programme of Work on Protected Areas contain actions related to capacity needs; however, tracking whether and how these are being implemented, and the outcomes achieved, is often not happening.

Capacity to manage is more than just the knowledge and skills of individuals; it is also the capacities of organisations and institutions to perform, influenced by individuals' motivation and leadership (Muller et al., 2015). The IUCN approach to capacity development for protected and conserved areas is based on the concept of competence: the "proven ability to perform a task or do a job" (Appleton, 2016, p.2), which can be defined in terms of the required combination of:

- **SKILLS** – ensuring the ability to perform a task reliably and consistently;
- **KNOWLEDGE** – providing a technical and theoretical background for the task; and
- **ATTITUDE** – helping an individual to complete a task positively, professionally, ethically and conscientiously, and including personal attributes such as leadership, critical thinking, creativity and collaboration (Figure 5.2).

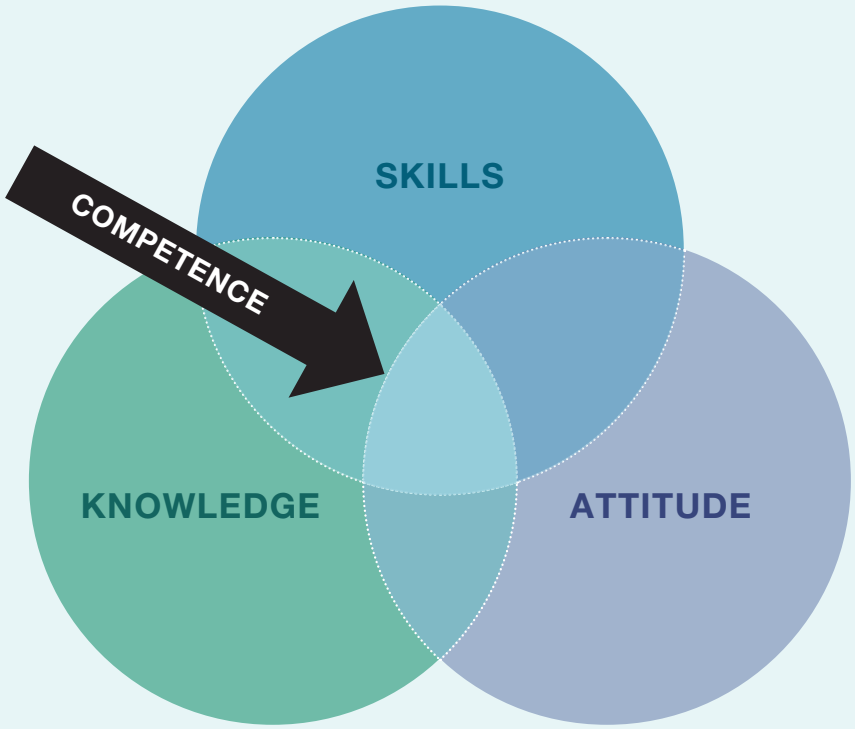


FIGURE 5.2 The Skills–Knowledge–Attitude model for competence. *Source: Appleton (2016, p.2)*

The competence-based approach adopted by the IUCN World Commission on Protected Areas is applicable to the context of Oceania because it recognises that competencies are gained in many ways, including life experience, formal education, understanding customary ways, apprenticeships, on-the-job experience, self-help programmes, mentoring, and training and development programmes. This makes it easy to apply to all the partners in management, ranging from highly qualified professionals to those with little formal education but having unique and valuable local knowledge and practical skills.

Through a wide process of consultation across the Pacific Islands region in 2015, five broad categories of competence with 34 specific sub-categories, have been defined and are described in Table 5.1 below (from Scherl & O'Keefe, 2016). Some of these were also re-iterated at the regional BIOPAMA inception workshop (IUCN, 2018).

These categories reflect a range of the required broad understandings, as well as specific technical knowledge and skills that are needed or are desirable to undertake work related to the planning and management of protected and conserved areas in Oceania.

Field skills are essential (groups D and E below), but successful field-work implementation also requires strategic and programmatic planning. This provides the institutional framework to position the goals of field-implementation within a broader context, and also provides the administrative and logistical support required (groups B and C). Competencies are also needed to improve the visibility of protected and conserved area management in the region, to promote its contribution to national and regional development, and to attract resources for the work (groups A and B). A vision of nested competencies needed within national jurisdictions will be the only way to achieve on-the-ground results.

TABLE 5.1 Competencies needed for protected area management in the Oceania region

GROUP A – REGIONAL ECONOMIC, SOCIAL AND ENVIRONMENTAL MANAGEMENT CONTEXT

- Social, economic and political trends;
- Protected areas in sustainable development.

GROUP B – FRAMEWORKS, POLICIES AND GOVERNANCE

- International and regional agreements and national policies;
- Governance models and approaches.

GROUP C – ORGANISATIONAL PLANNING, MANAGEMENT AND ADMINISTRATION

- Strategy and planning;
- Organisational leadership and development;
- Human resources;
- Financial and physical resources;
- Administration, reporting, documentation, and monitoring and evaluation.

GROUP D – SITE PLANNING, APPLIED MANAGEMENT AND TECHNICAL KNOWLEDGE

- Biodiversity conservation;
- Environmental values and services;
- Human dimensions, livelihoods and culture;
- Ecosystem-based management planning;
- Participation;
- Economics in conservation;
- Laws, regulations and rights;
- Commercial enterprises;
- Site planning;
- Climate change mitigation and adaptation;
- Field skills and on-ground management;
- Technology and decision support tools;
- Monitoring, evaluation and adaptive management.

GROUP E – SKILLS, TOOLS AND TECHNIQUES

- Financial management, accounting skills and budgeting;
- Interdisciplinary and multi-skills teamwork;
- Partnerships building;
- Problem-solving;
- Negotiation and conflict resolution;
- Leadership;
- Communication;
- Facilitation and managing meetings and committees;
- Project planning and management;
- Proposal development and report writing;
- Contemporary scientific techniques;
- Imparting knowledge.

Source: Adapted from Scherl & O'Keefe (2016)[29]

[29] For the description of these specific categories refer to Scherl and O'Keefe (2016, pp.23–27).

In addition, the learning needed by trainers from outside the Pacific is worth emphasising here (some of those already mentioned in Section 5.3 above). This learning relates to understanding local and traditional/indigenous ways of being, their knowledge, language, culture, and management practices. Capacity development should be culturally safe and a two-way approach when people from outside the region are involved. In addition, greater effort should take place for 'train-the-trainer' whereby outside help and nationals in the region work together to achieve best outcomes for training development and delivery.[30]

To support an understanding of the nested competencies needed, the IUCN WCPA Capacity Development Specialist Group published a Competence Register (Appleton, 2016). The register has a near-comprehensive list of 300 skills and associated knowledge requirements (competences) for protected area management and associated work[31] This register (and accompanying tools) and/or the specific understanding of knowledge requirements regionally in Table 5.1 can both be useful in Oceania to analyse capacity needs, design course curricula and formulate job descriptions within designed staffing structures that support performance assessments (for example as in Fiji and Papua New Guinea mentioned above).

A competence-based approach can be most effective if linked with national qualification frameworks, and should be considered across the Oceania region.

Incorporating traditional knowledge is important in capacity development in the region (© Lea M. Scherl)

[30] An example of a contribution related to this was mentioned in: Food and Agriculture Organization of the United Nations (FAO) (2017). Final Evaluation of the Project "Forestry and Protected Area Management in Fiji, Samoa, Vanuatu and Niue (GEFPAS-FPAM)." Office of Evaluation, Project Evaluation Series. Rome, Italy: FAO. http://www.fao.org/3/i8574en/I8574EN.pdf (pp. 28–29).

[31] An Excel WorkBook that includes all competences and supporting material that can be searched and sorted for user needs can be downloaded from https://sites.google.com/site/wcpacapacity/home/competence-register).

BOX 5.2 REGION-WIDE INFORMATION ON PROTECTED AREA CAPACITY DEVELOPMENT OPPORTUNITIES – CHALLENGES AND OPPORTUNITIES

Vainuupo Jungblut, SPREP, Protected Areas Officer

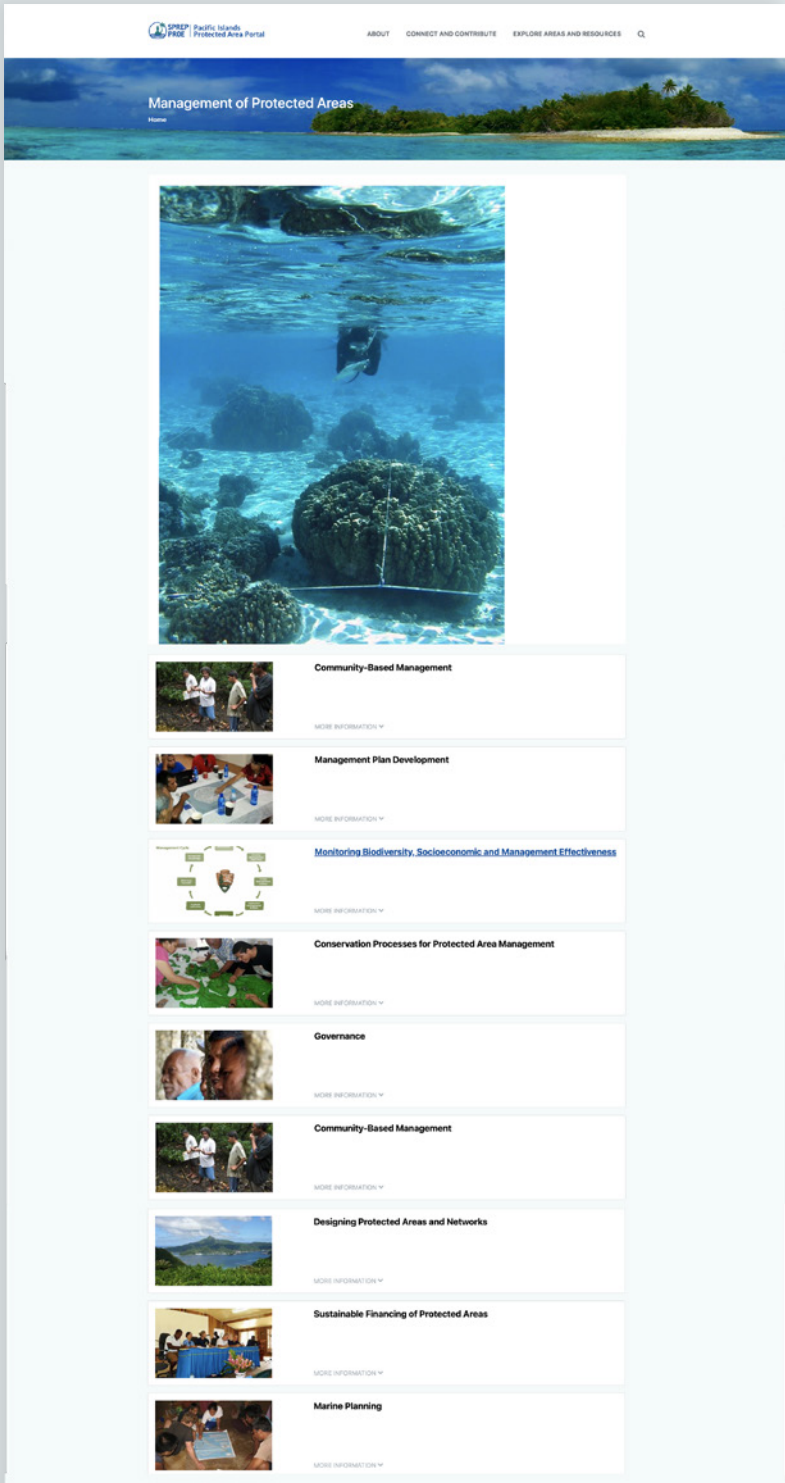
Capacity development for protected and conserved areas has always been raised as a critical need for key national stakeholders, yet is limited (compared to the size of the need) in terms of useful opportunities available.

There has been no regular coordination around the collation of information on opportunities for protected area-related capacity development in the region. So far, capacity development initiatives have been informed largely by national priorities and needs articulated in:

- National Biodiversity Strategies and Action Plans (NBSAPs);
- National reports to the Convention on Biological Diversity (CBD) and other related MEAs;
- National action plans for implementing the CBD's Programme of Work on Protected Areas (PoWPA);
- National State of Environment (SOE) Reports
- National Roadmaps for Aichi Target 11 (CBD, 2016);
- Direct feedback gained through both remote and in-country consultations with countries; and
- Information collated for specific regional and national projects.

The PIPAP weekly newsletter has been a useful means of disseminating protected area training initiatives to a wide audience. The weekly newsletter relies very much on subscribers sending through specific details of new capacity building initiatives that would benefit the region – this occurs only on an intermittent basis. Furthermore, the compiler of the newsletter has to regularly do 'research' to identify any new or useful capacity building initiatives relevant for the region. Thus, accessing information on the status of capacity-development region-wide still remains challenging.

The PIPAP currently links to over 6,000 information resources, including information related to capacity building initiatives (visit: https://pipap.sprep.org/search/content). In the future, it would be ideal to revive and upgrade the PIPAP training register as a regularly updated, easily searchable, central repository for information on protected area capacity development initiatives and opportunities.



5.4 Modalities for capacity development in the region

Competences focus on what skills, attitudes and knowledge are needed, while modalities refer to the form of learning or how capacity is developed. In this section, we outline principles for selecting modalities, present a framework for delivery of capacity development, and use the modality types to describe what is being implemented in Oceania.

Knowledge can be shared through a combination of formal learning (in both academic institutions and vocational 'on-the-job training'), tailored courses, informal and distance learning, and mentoring. In addition, capacity development works at institutional level, for instance, through transforming management agencies into strong 'learning institutions' which are well resourced to support people in both the office and the field.

Keeping track of capacity development programmes and opportunities can be difficult. There is no systematic compilation of capacity development approaches and initiatives for managing protected and conserved areas in Oceania, and it is challenging to compile and continuously update an inventory of such information. The *Pacific Islands Protected Area Portal (PIPAP)* hosted by SPREP, and currently funded by BIOPAMA, is the best effort towards this (Box 5.2). Much depends on the willingness and initiative of groups and organisations undertaking capacity development across the region to share such information.

Monitoring and evaluation of capacity development efforts, if conducted, are also not widely shared. It is not possible to analyse which approaches have been most successful, given the paucity of information.

5.4.1 PRINCIPLES FOR EFFECTIVE CAPACITY DEVELOPMENT IN THE REGION

Choosing the most appropriate range of modalities and approaches for capacity development in protected area management needs to respect the regional context. Some relevant principles, drawn from stakeholder consultations undertaken in developing the Pacific Islands Regional Capacity Development Strategy (Scherl & O'Keefe, 2016), are:

- Support, strengthen and improve existing institutions and programmes that demonstrate good outcomes; strengthen the capacity of individuals and groups already practising in the field and based in the region (e.g. train the trainers);
- Use proven techniques, tools, practice case studies and resources that are already available or that can be adapted to the Oceania region context;
- Avoid the pitfalls of adopting outside-imposed approaches and tools at the expense of respecting what has been working and tested in the region, or what could still be developed to better suit the regional context;
- Incorporate regional strengths, including traditional knowledge, learning by doing, and oral informal information exchanges;
- Tailor capacity development to different locations, durations, circumstances, audiences, topics, languages and socio-cultural contexts; and
- Explore diversity of learning partnerships and move beyond training institutions and environmental organisations.

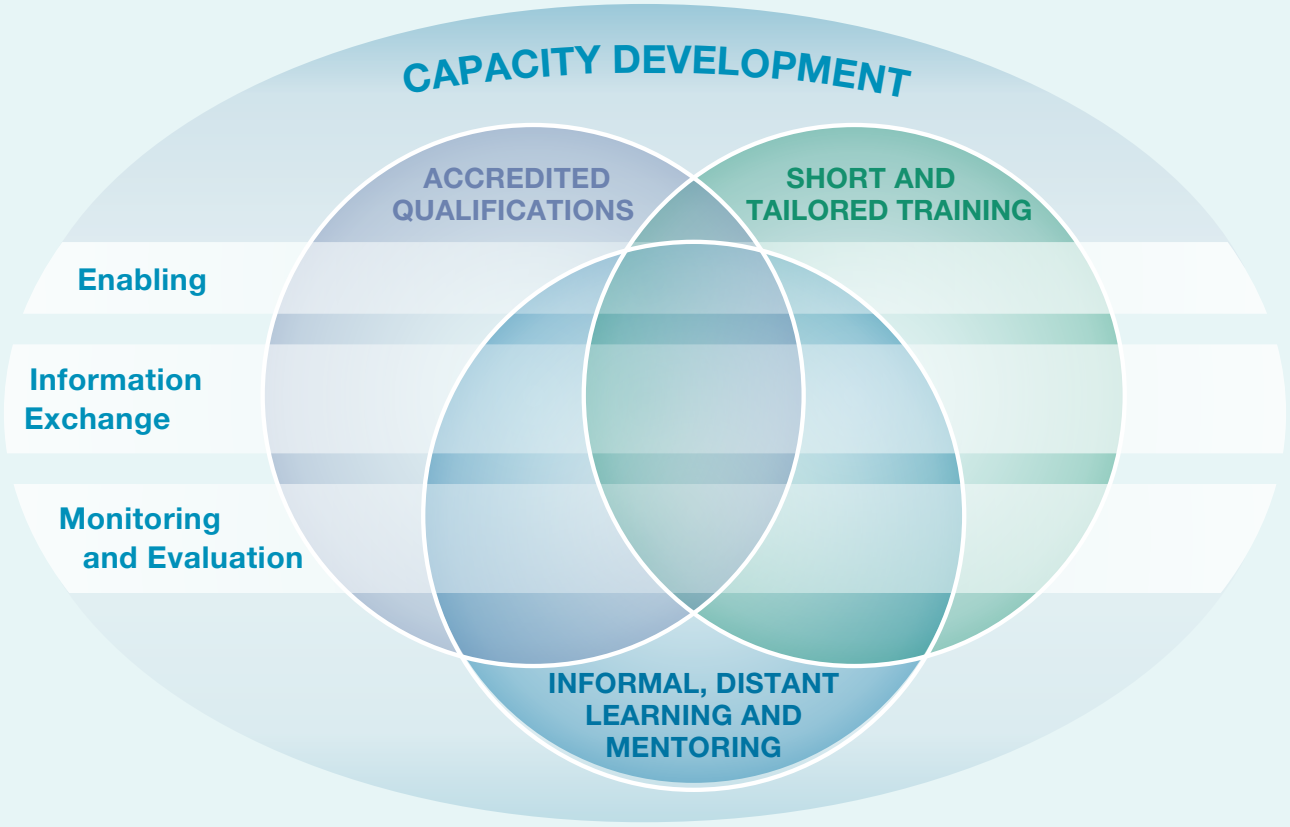


FIGURE 5.3 Framework for capacity development in the Oceania Region.
Source: Adapted from Scherl and O'Keefe (2016, p.16)

Based on relevant literature and stakeholder discussions, a framework for capacity building in Oceania was developed (Figure 5.3). The three main pillars of the framework are the principal modalities: accredited qualifications; short and tailored training; and informal, distance learning and mentoring. There are overlaps across modalities of training: for example, a short-term training course or informal learning process can be accredited towards a formal qualification, including by recognition of prior learning. The cross-cutting elements of the framework are the backbones that make it all possible. *Enabling refers to partnerships and resource allocation needed for capacity development to take place. Through i*nformation exchange, curricula can be updated and developed to cater for ongoing and changing needs. Monitoring and evaluation provide vital information to calibrate approaches and content for delivery as needs evolve.

ACCREDITED QUALIFICATIONS

Accredited qualifications can build a pathway for learning and qualifications from school level through to post-graduate qualifications. These pathways are accessible and appropriate for a wide range of people, from young people progressing through an academic process to older community members who wish to develop new skills or to have their abilities and knowledge formally recognised. The strength of accredited qualifications is that they can be recognised across a country or even internationally, so can open a range of future employment opportunities within the conservation sector or elsewhere.

Tertiary accredited pathways are used to build a strong capable pool of professional and technical personnel in the region. There is a current lack of clearly identified tertiary pathways for training related specifically to protected area management within institutions based in Oceania. Individuals practising in this field with tertiary education from regional or national academic institutions are most likely to have a science degree (see Box 5.3 below). Regional and national tertiary institutions play an important role in training future practitioners. They also support the establishment and management of protected and conserved areas in other ways, for example through research, monitoring, and specialised course delivery. Many graduates from the University of the South Pacific (USP), for instance, have gone on to hold senior positions within government, community and non-government organisations (see Box 5.3).[32] National tertiary institutions also play an important role as many leaders working in the environmental and related sectors have graduated from institutions such as the University of Papua New Guinea and the Fiji National University.

BOX 5.3 UNIVERSITY OF THE SOUTH PACIFIC

Prof Elisabeth A. Holland (PaCE-SD), Dr Gilianne Brodie (IAS), Dr Isoa Korovulavula (IAS) and Prerna Chand (PaCE-SD) with input from IAS and PaCE-SD staff, University of the South Pacific

The University of the South Pacific (USP) is one of the leading higher education institutions in the Pacific region. Established in 1968, the University is jointly owned by the governments of 12 member countries: Cook Islands, Fiji, Kiribati, Republic of the Marshall Islands, Nauru, Niue, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu and Samoa. The University has campuses in all member countries. The main campus, Laucala, is in Fiji. In total there are more than 26,000 students from 16 Pacific Island countries. The majority of graduates who are interested in biodiversity conservation and protected area management have completed science-based degrees at the University (e.g. environmental science). Those degrees include numerous Pacific-centric accredited courses in environmental stewardship, ranging from governance and sustainable development, to spatial mapping, environmental law, land management, ecosystem-based adaptation, environmental impact assessment and strategic environmental assessment, environmental change and green development, urbanisation, development and urban planning, climate and disaster resilience and climate change. These accredited courses from TVET (Australian Qualification Framework level 1) to Doctoral Degree (level 10) are critical for cross-sectoral protected areas management.

To build on past successes, the University is looking to establish a postgraduate programme specifically focused on marine conservation and protected area management (Master's in Pacific Islands and Ocean Stewardship). The PIOS programme fills a longstanding need identified by multiple curriculum and capacity reviews and was called for by the 2017 Pacific Island Roundtable (PIRT) meeting held in Honiara, the Solomon Islands. This could build on a strong foundation of Pacific indigenous and local knowledge informed by traditional science approaches. The future of the Pacific Ocean and Islands and their protected areas depends on working together to build a sustainable foundation of education and research embodied in Pacific cultures and cosmologies.

[32] Information from personal communication with USP staff that contributed to Box 5.3.

Many in the region who wish to practise in environmental and protected area management choose to study undergraduate or postgraduate degrees abroad. Scholarship opportunities for accredited degrees are regularly offered, and many professionals currently in senior positions at government agencies or NGOs have been recipients of scholarships. Overseas scholarships are very competitive, and when awarded tend to cover all costs of travel, university fees and living allowances. While scholarship schemes give opportunities for students to study in Australia, New Zealand or further afield[33], a disadvantage is that professionals already practising in this field leave for lengthy periods of time and some then choose to stay abroad. It is difficult to judge how much capability is lost to the region in this way. There is also a perception that tertiary institutions based in the region are not receiving the financial support necessary to develop such accredited pathways. Better approaches are needed to strengthen institutional capacity within Oceania and retain much needed professionals, while also benefitting from expertise through partnerships with international institutions. This is often difficult to achieve, as Prof Holland of the University of the South Pacific stated (pers. comm.): "Securing funding to establish an interdisciplinary program to provide a holistic approach to research and education in ocean and island stewardship that will contribute to protected area management feels like swimming out against a permanently incoming tide."

In addition to tertiary education, vocational studies widen work-related knowledge and strengthen skills for professionals and technicians and for custodians of protected and conserved areas.

Vocational training through colleges and registered training organisations can also be a pathway towards tertiary qualifications and can be used to rapidly increase capacity in the field. The flexibility in the modality of training that a vocational curriculum may allow is attractive; for example people can potentially undertake training in blocks and still work at the same time. The only regionally-based initiative of this type of training was developed by the Fiji Ministry of Forests. After consulting with the potential end-users from government, non-government, industry sectors and local communities, the Ministry designed a programme structure and developed teaching modules for biodiversity conservation and protected area management. This curriculum, that could also be applicable to other countries in the region, teaches theoretical content and its practical application, including specific skills needed to undertake activities in this field of work. It is structured into six levels with a modular delivery approach tailored to a range of training audiences and graduate profiles across levels (FAO, 2017, Appendix 1). People from Fiji have participated in curriculum development and have been equipped with the skills to offer training, although sustainable funding for implementation remains an issue.

SHORT-TERM COURSES AND TAILORED-TRAINING

Short courses and tailored training aim to aid practice and implementation of activities, widen knowledge and strengthen skills. They may or may not be accredited; a plethora of short-term courses have been conducted in Oceania over a long period. Such types of training are tied mostly to specific interventions, or support roles within institutions and wider national and regional networks. They have made a substantial contribution to enhancing capacity for protected and conserved areas management, and have had great success in bringing people together for collective sharing and learning. However, they are often donor-driven, one-off, and without secure funding. Once funding ceases, the course content disappears so that no other group or agency can continue the training. While an inventory of such courses across the region is difficult to assemble (see Box 5.2), it should be attempted so that efforts are not duplicated and there is the potential to build on previous content and tailor it for another context. Sharing course content can be hindered by issues related to intellectual property rights.

National institutions across the region regularly run short-term courses. Exchanges and partnering

[33] The perception of some practitioners in the region is that there are now fewer opportunities to study in Australia and New Zealand and more opportunities in Asia.

across institutions for such delivery is growing. The Wildlife Conservation Society in Fiji, for example, has been implementing a substantial programme for ecosystem-based management to develop 'ridge-to-reef' plans and support communities, maintain healthy, productive and resilient ecosystems and in 2015 compiled a practical *Facilitator's Guide for Ecosystem-Based Management Planning in Fiji*. Dr Sangeeta Mangubhai (Wildlife Conservation Society Fiji, pers. comm.) explained that:

> The guide has been used to train, mentor and work alongside officers based in provincial offices for district- and island-scale planning in Bua and Lomaiviti. Staff from the provincial office use the guide to facilitate sessions to support communities [to] identify threats to their resources, and the strategies to address them. The planning process is informed by traditional ecological knowledge of natural systems and complemented by biological and/or socio-economic assessments. The resulting management plans have strengthened existing community protected areas under traditional management, created new protected areas and formalised management rules to regulate the use of coastal fisheries and terrestrial resources at a district-level.

Short-term courses for particular purposes as part of project implementation are also common, like the 5-day intensive training courses in land-use planning that were essential to develop a proposed land zoning which helped eight communities of Savai'i Island in Samoa to establish three new Community Conservation Areas with a total area of 14,706 ha (see Box 5.4).

Ecosystem-based management planning training women's group, Fiji (© WCS)

BOX 5.4 SUCCESSFUL BIODIVERSITY CONSERVATION AND PROTECTED AREA ESTABLISHMENT AND MANAGEMENT BENEFITS FROM SPECIALISED TRAINING

Rudolph Hahn

Communities of Savai'i Island in Samoa requested help to establish protected areas on their communal land. After the assessment of biodiversity, potential ecosystem services and current threats, land-use plans had to be developed with the objective to identify the location of the protected areas. Intensive five-day training courses in land-use planning were delivered to representatives of men, women and youth from each village, using a participatory three-dimensional model for each village's land (FAO, 2015).

Following the contour lines of topographical maps, and with the help of local experts, a three-dimensional model of each village with its physical features of natural formations such as mountains, valleys, rivers, lakes, wetlands, beach and coastline was constructed. The participants added all human-made features such as roads, settlements, water supply systems, farmland and forest areas. Hotspots for biodiversity conservation and critical areas for important ecosystem services were marked. The final outcome was a proposed land zoning with the categories: settlement, farm and forest land, the boundaries of the proposed protected area and ecosystem restoration areas.

Complemented with extra capacity building activities, this intensive training course was successful because of its highly participatory action-learning approach and the incorporation of local traditional knowledge, while considering the needs of the different stakeholders. It contributed to a high level of ownership of the decision-making process within the landowning communities. The models are still displayed in the villages for further land-use planning, and schools use them regularly for environmental education.[34]

Taga and Gatavai villages developed 3D model for land use planning and protected area management, Savaii, Samoa. (© FAO/Philip J. Tuivavalagi)

[34] The development of protected areas in Savai'i was supported by the Government of Samoa and the project 'Forest and Protected Area Management, FPAM FAO/GEF' of the Food and Agriculture Organization (FAO) and Global Environment Facility (GEF).

Continuing training opportunities that are based in the region and available to any interested party are rare. An example is The Forestry Training Centre (Fiji) Tailored-Training in Biodiversity Conservation and Protected Area Management. This training has been conducted successfully for landowners, rangers and conservation officers (see Box 5.5).

In terms of capacity development approaches, this type of semi-formal and community-based training are the most successful so far. [This is] because they are hands-on and aiming at direct application, they have already proven to be effective to achieve conservation outcomes. After the course, community leaders have taken upon themselves to use such knowledge to impart greater awareness of the need for biodiversity conservation management and convince communities to allocate more areas to do so.

Susana Waqainabete-Tuisese, Senior Director Pacific Regional Program for Conservation International, pers. comm.

Demand for short-term and tailored courses will continue to increase in the region due to a growing number of projects being implemented in the field of environmental management. A range of possible collaborations is also being identified in the region, for example by the Protected Areas Learning and Research Collaboration (Chapple, 2019). Such a need for short-term tailored training for people working on the frontline of conservation is supported by the findings of a global analysis (Belecky et al., 2019).

INFORMAL AND DISTANCE LEARNING AND MENTORING

Informal learning is very important but often under-recognised in this region. Culturally an important part of a learning process is sharing ideas through, for instance, *talanoa* sessions (referring to a conversation, chat, sharing of ideas and talking with someone; a concept shared by Tongans, Samoans and Fijians), or walking through sites with elders to increase intergenerational knowledge transmission. Another example of informal learning is developing programmes for the youth like the 'Heritage in young hands' programme at Sigatoka Sand Dunes National Park, Fiji, which provides hands-on opportunities for young people to help nature and have fun while learning. WWF Pacific Volunteer Programme also provides hands-on experience in the community and often leads to paid employment.

On-the-job learning, mentoring, teaching skills as one goes, and relevant exchanges and study tours

BOX 5.5 TAILORED SHORT-TERM TRAINING IN BIODIVERSITY CONSERVATION AND PROTECTED AREA MANAGEMENT

Mereoni Bativesi, Ministry of Forests, Fiji

The Fiji Forestry Training Centre, part of the Ministry of Forests, offers tailored skills training on biodiversity conservation and protected area management that can be implemented nationally and in any other country of the Oceania region. This tailored training targets different types of organisations and groups at all levels: government agencies, non-government organisations, private sector, resource owner organisations, community organisations and community groups and leaders. The philosophy promotes a culture of continuing adult learning that stimulates acquired knowledge and skills to be used in the practice of environmental management; aiming to enhance skills of people already working and/or contributing to biodiversity conservation and management. The course content, duration and locations of delivery can be tailored to any client's specific needs and is envisaged for periods of one to two weeks (including a field excursion). It is aimed at groups from 12–20 participants to allow a dynamic learning environment. It can also be tailored to managerial and strategic levels for organisational planning and project management.

(across countries or across locations within a country) are extremely valued opportunities in the region and an effective form of informal learning – "*seeing, doing and talking*". Such opportunities periodically occur in the region. For example, in 2018, a group of Fijians from government ministries visited Queensland, Australia to experience first-hand the philosophy and management of protected areas there (FAO, 2017). Training has also been conducted in marine protected areas using a model of exchanging practical knowledge across countries in Asia and the Pacific like the 'International Coral Reef Management and Leadership Program' implemented in the past (e.g. by Reef Ecologic consultancy group and supported through the Australian Awards Fellowship Program (DFAT[35])). International coaches' networks may be suitable in Oceania, but should be initiated from regionally grounded groups and institutions.

There are some other modalities worthy of further exploration in terms of their potential application in the context of protected and other conserved areas planning and management in the region. For instance, 'Leadership Fiji' – could support the development of future leaders for both protected areas and other sectors that require an understanding of the environment and protected areas. In the same vein, the Packard Foundation provided leadership training for community leaders, to support community-based governance, which could also be tailored to other contexts.[36]

Environmental awareness campaigns can be very effective at breaking the first barrier to deeper personal commitment to stewardship and management of the natural environment. The Wakatu Fiji Campaign (2016) through radio, TV and newspapers and the accompanying flipchart in the local language developed for community workers to use was highly effective and reached a wide audience.[37] Awareness campaigns instil interest in the larger population for the support of protected areas and also stimulate curiosity for further training and understanding. In the case of the Wakatu campaign, many landowners and community leaders were subsequently participants of short-term trainings in biodiversity conservation. Environmental awareness to build understanding and capacity is incorporated into many of the National Biodiversity Strategies and Action Plans (NBSAPs), such as Nuie's NBSAP goal #6 (Government of Niue, 2015). The still emerging partnerships between environmental and faith-based organisations could contribute greatly to such environmental awareness and needs to grow in the region.

Ranger exchanges are another very effective informal learning approach. For example, in recent years learning exchanges have been arranged between the Queensland Ranger Association[38] and rangers in the Solomon Islands. This programme has seen the transfer and adaptation of practical skills, with partnership across indigenous corporations and government institutions. Ranger exchanges could also potentially build coalitions of interested parties in this region to develop specialised curricula for particular functions. This has been the case elsewhere where increasing interest in standards and competences is encouraging sector-driven development of curricula and programmes (Lotter et al., 2016). While we know ranger exchanges boost morale, it is thought that such exchanges and study tours also enhance capacity development for protected and other conserved areas, foster better practice, and support the international coalition to improve ranger working conditions.

Training programmes online, learning through peer-to-peer practitioners' social networks, online mentoring and participating in live streaming webinars are part of self-directed learning, and are proliferating capacity-development approaches in some parts of the world. The remarkable success of the (free) certified online training programmes on protected area management and conservation of the IUCN Program on African Protected Areas and Conservation and the CBD Secretariat represent a shift to more accessible, sector-defined and

[35] https://reefecologic.org/wp-content/uploads/2018/03/DFAT-ML-FINAL.pdf

[36] https://static1.squarespace.com/static/56d37b38356fb00921407837/t/577f511215d5dbbc19b91af8/1527483580686/GCPNL+Evaluation+Report+Full+Version+Final.pdf https://static1.squarespace.com/static/56d37b38356fb00921407837/t/5b10adf570a6ad1221afc262/1527819848665/Fiji+Leadership+Development+Programme+Evaluation+16_17.pdf

[37] Wakatu Fiji, 2016, https://www.facebook.com/WakatuFiji/

[38] https://queenslandranger.org/

learner-driven training.[39] Such approaches are, however, still challenging for this region. This is partly because of remoteness and unreliable and expensive internet connections in some places. Social networks are the most promising and widely used, particularly if created after a specific capacity development activity or workshops, that bring together a collegial group of people with common interests.

We need improved understanding in the region as to why some modalities for capacity development are more effective than others for certain audiences and objectives. This understanding should develop as more rigorous monitoring and evaluation of capacity development efforts and their impact for conservation delivery become part of the professionalisation of protected area management. Managers and project leaders should consider the context before settling on the most appropriate approach, in partnership with training providers. Building institutional capacity will ensure a more sustainable outcome and ownership for protected area management. The section above discussed the current state of capacity development in the region, with examples of some successes and opportunities. We now turn our attention to some of the capacity development challenges that will continue to affect this region.

5.5 Challenges[40]

A holistic picture is needed to effectively provide capacity development at multiple levels. Most protected area management organisations or management arrangements at any level and from different sectors (government, NGOs or private) have limited human and financial resources. This affects not only the effectiveness and efficiency of management, but also investment in capacity development for their personnel and for other partners in management.

Establishing partnerships is vital but needs capacity and willingness to initiate such processes and forge successful collaborations. Oceania has a rich and positive spectrum of governance options for managing protected areas, including co-management and collaborative management (see Chapter 3). However, multi-stakeholder partnerships can be very challenging and expensive to initiate and maintain, especially where the partnerships are across long distances, sea crossings and poor road networks. This challenge is compounded where communication facilities, including internet access, are very limited.

Individual capacity development is difficult in the context of poorly resourced organisations and often the opportunities available elsewhere are not well known. Capacity development opportunities are not always well suited to people who are already in jobs and often supporting families. Ongoing mentoring that could take place instead is seldom used as a learning mechanism. At the local level, more emphasis on traditional knowledge is needed, and incorporating this into organisational processes requires dedicated resources.

Capacity development that is taking place in the region, particularly involving other non-conventional approaches, is targeted, localised and often not known across other potential beneficiaries. In many cases, short-term training events are associated with specific projects that have their own agenda and are not fully integrated into an overall capacity development programme. Useful information may not be shared because of institutional restrictions, intellectual property rights or for lack of suitable mechanisms and infrastructure to do so.

It is also challenging and complex to develop strategies for effective capacity development that need to take place at multiple levels concurrently (individual, organisational, societal) for a concerted impact over time (see Muller et al. (2015, pp.261–262) for further details).

[39] See https://papaco.org/moocs/ and https://www.cbd.int/protected/e-learning/

[40] Partially adapted from Scherl and O'Keeffe (2016). Noting that these challenges were summarised from the experience of practitioners in the region through a consultation process – i.e. they reflect first-hand analysis from practice.

5.6 Conclusion

Individuals, organisations and wider society should have the capacities to enable and support the transformational change required to increase the extent and quality of protected and conserved areas, and to mainstream them into broader societal goals, firmly positioning them as essential tools for achieving conservation and development objectives (Scherl & O'Keeffe, 2016, p.13).

How then can this region continue to support this goal?

Protected area managers are professionals. It is important to promote and support protected area managers, stewards and custodians from all types of protected areas as professionals, as recommended at the 2014 IUCN World Parks Congress. It is also critically important to address the need for protected area training in the context of national and regional qualification frameworks that progress from school to technical training and university. This would ideally offer opportunities for training (like tailored and short-term training) to be recognised as part of a pathway to accredited vocational and tertiary degrees.

Considering capacity development plans for protected areas at national levels is a goal that needs to be articulated, discussed and updated progressively as part of the NBSAPs. This could then feed into a national strategic vision for capacity development for protected areas. This vision should be grounded in capacity needs assessments that take place at the start of any programme or project, and are ongoing within institutions with dedicated resources to assess the different levels of groups and people involved. Capacity needs assessments should target all participant groups and progressively build a region-wide picture.

Approaches for capacity development need to be better understood and shared region-wide. A stocktake of all capacity development activities and initiatives, their objectives, their audience, modalities of implementation, and their effectiveness in terms of principles adopted, approaches used and impact on conservation would be very useful, and guidance for this type of compilation could be developed. Within that, it is particularly relevant to note how capacity development strategies and modalities of implementation have been adapted to the regional context. At the national level, such a stocktake could form an appendix to National Biodiversity Strategies and Action Plans. This information could then be elevated to the regional level, centralised, and made easily accessible, perhaps through the Pacific Islands Protected Area Portal (PIPAP)[41] to inform regional strategies.

Partnerships are essential given the diversity of skills and knowledge required in this field. How these partnerships are formed should be carefully considered so that approaches and tools for capacity development are not imposed, are well suited to the regional context, and lead to equitable distribution of benefits for partners. National Protected Areas and Resource Management Committees or similar groups, where they exist, play an important role to foster such partnerships and to identify capacity development needs and exchange information on opportunities, best approaches and funding possibilities. This type of leadership and mechanism at national levels should be strengthened so they can continue to play a critical role in the future, and connect with other efforts worldwide to build leadership for conservation.[42]

[41] https://pipap.sprep.org/

[42] E.g. https://capacityforconservation.org/

Capacity development requires dedicated resources through institutional operational lines, and project or programme activity budgets, particularly as capacity development will continue to be aligned to donor funding for some time in the region. Vocational and tertiary level training will need financial sustainability for their continuous implementation. They should also be based on regionally grounded institutions and priorities so that finances can strengthen existing and often struggling training centres or training units within larger institutions and universities. The shortage of sustainable, consistent and concerted (rather than opportunistic) funding is nowadays the major barrier in the region to strengthening capacity development in protected areas planning and management. From the perspective of potential donors, the support to regionally-based training centres, training institutions, and other organisations is a call to build on what has already been achieved and help to create synergies and exchanges across countries.

Monitoring and evaluation should be considered an essential part of capacity development delivery to improve on approaches, content and adapting delivery to audiences, contexts and evolving needs. This kind of record keeping is useful for future efforts, and brings together the perspectives of training providers and students into a more systematic reflection. We also need to evaluate the impact of capacity development strategies on conservation, applicability to different situations and their ability to be replicated or adapted. Thus there is also a critical need to develop more rigorous, measurable and impact-focused systems to evaluate capacity development investments throughout the region. Along with that, in particular, action plans to implement the CBD Programme of Work on Protected Areas should be monitored to get a better understanding of the level of effort and investment that is going into capacity development, which at present remains unknown and unquantified.

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CHAPTER 6

WELL-BEING

Market in Solomon Islands (© Helen Pippard)

AUTHORS

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WELL-BEING

CHAPTER 6

Well-being

6.1 Protected and conserved areas as elements of socio-ecological systems

Most protected and conserved areas can more accurately be described as *socio-ecological systems:* ecosystems that retain large elements of 'wild nature', but which have been altered to some extent or other by human activity, often over millennia, and which have in turn shaped human behaviour. Indeed, some of the world's centres of biodiversity richness maintain these values because local human communities both use and conserve natural resources. In this chapter, we build on the earlier sections of the report by focusing out beyond in-situ management and governance to examine the potential contribution of protected and conserved areas to societies and the well-being of local communities. Understanding this, and ensuring the provision of these benefits, will underpin the success of these areas. The chapter examines the available research and evidence on the benefits provided by protected and conserved areas to local communities in the region but highlights that there is a significant gap in published material around these issues.

Human influence comes in many forms. Throughout much of the world, for example, controlled use of fire has created massive and long-lasting changes to ecosystems, replacing dense forests with grasslands or savannahs (Pyne, 1997). Various forms of extraction are also important; collection of plants and animals for food, medicines, building materials and other products alters population structure and can remove some species altogether. On the other hand, the needs of settled human communities can encourage conscious and effective management of nature to retain sustainable supplies of valued wild species, by establishing zones of protection, limiting collection and encouraging active restoration. Conversely, additions to ecosystems can also have profound impacts, perhaps nowhere more than in Oceania where invasive species ranging in size from mosquitoes to mammals continue to create massive and irreversible changes to island ecosystems (Tye, 2009; Meyer, 2014). So too does pollution of the air and water, of which the various pollutants contributing to climate change are together creating perhaps the most significant ecological modifications.

Along with this growing realisation that natural ecosystems are not nearly as natural as was once assumed is a recognition that they are also far from neutral areas with respect to human society. Rather, they are providing a range of services that it is difficult or impossible to replicate in other ways. 'Ecosystem services' and 'nature's contributions' are amongst the terms used to recognise and describe these values; and all are vital to well-being. This recognition underpins the Healthy Oceans – Healthy Islands – Healthy People vision of the Pacific Islands Framework for Nature Conservation and Protected Areas 2021–2015:

> Our people proudly honour, value and protect our natural and cultural heritage and cultural identity for the wellbeing of present and future generations; the waters of our streams, lagoons and oceans are bountiful and unpolluted; our mountains are wild, our forests intact and our beaches unspoiled; our towns and gardens are healthy and productive; our societies are vibrant, resilient and diverse; we have equitable relationships with our global partners and our economies thrive; our cultures and traditions are widely appreciated; and the products of our creativity and labour are especially prized.
> (SPREP, 2021, p.6)

6.2 Conservation as part of sustainable development and well-being

Management of protected and conserved areas is thus often not just a case of setting aside an area and letting nature run its course. The long interaction between ecosystems and people means that in many cases the values for which a site is recognised will decline without a continuation of the management that created the current conditions. We call these 'cultural landscapes and seascapes', and they make up a much larger proportion of the total protected area estate than is generally understood (Brown et al., 2004).

It is also increasingly recognised that effective management of a much broader range of protected and conserved areas often needs to consider provision of ecosystem services (see 6.2.1) alongside nature conservation. Most protected and conserved areas have people living nearby or within them (Jones et al., 2018). Although by their definition protected areas are managed primarily for nature conservation, in practice effective management balances multiple objectives, including those of both local and more distant human communities, suggesting that management decisions are almost always to some extent a trade-off between different points of view (Maginnis et al., 2004). This becomes increasingly the case with the new designation of 'other effective area-based conservation measures' (OECMs, see 1.2.2), where biodiversity conservation is achieved although is usually not the primary reason for management (IUCN WCPA Task Force on OECMs, 2019).

Conservation is often perceived as being the enemy of development and well-being, with protected and conserved areas seen as 'wasted space' or the playthings of a privileged elite. But good conservation is a key component of sustainable development, maintaining the ecosystem services that it would be difficult and far more expensive to replace by artificial means. Effective conservation and maintenance of ecosystem services generally requires siting protected and conserved areas within broader managed land- and seascapes, in order to maintain processes and manage threats at the scales in which they operate (Section 1.7; Jupiter et al., 2014a). While this has been argued by conservationists and some development experts for many years, it has taken a long time for much of the rest of the world to catch up.

But increasingly, messages about the importance of conservation are coming strongly from outside the conservation field, particularly as the world has faced critical challenges associated with the COVID-19 pandemic and climate change. António Guterres, Secretary-General of the United Nations (UN), said in 2020 that "Making peace with nature is the defining task of the 21st century. It must be the top, top priority for everyone, everywhere" (Guterres, 2020). The Organisation for Economic Cooperation and Development highlighted that "National recovery and resilience plans [following the pandemic] constitute unique opportunities not just to jump-start our economies, but also to undertake bold and transformative action to make them more equal, cohesive and environmentally sound, in line with the 2030 Agenda and the Sustainable Development Goals" (Gurría, 2020). The World Economic Forum recognises that there is "no future in business as usual" and that "a fundamental transformation" is needed in socio-economic systems "by transitioning to nature-positive solutions" (Khatri, 2020). Such messages, from institutions that have long been champions of conventional economic development, are echoed throughout the UN system, the European Community and countless national governments. In a few years and stimulated at least in part by the global upset caused by COVID-19, these ideas have moved decisively from fringe to mainstream.

The Oceania region has in some respects led the way in explaining these crucial links between livelihoods, well-being and what is often referred to as 'Western' conservation practice. In Oceania it is argued that these close linkages are reflected in perceptions of humans as part of nature, as opposed to dominant Western views of people apart from nature (Jupiter, 2017). Across the region it is hard to separate the definition of 'conservation' from that of 'sustainable use' (Govan & Jupiter, 2013). In the Republic of the Marshall Islands (RMI), for example, there are only two types of conservation areas. Type I are for subsistence only; these areas are managed for non-commercial use and related to IUCN Category VI. Type II, Special Reserves, are no-take or highly restricted areas; they have a high level of protection but can still very occasionally be used for low levels of subsistence or 'special occasion' activities (Republic of the Marshall Islands, 2017).

Bikini Atoll in Marshall Islands (© Kurt Cotoaga/Unsplash)

Some nations have combined traditional/customary practice with the development of protected or conserved areas, which benefit both the well-being of the local population and the conservation of habitats and species (Richmond et al., 2007). Pacific Islanders are often motivated to engage in place-based conservation through a strong desire to maintain cultural knowledge, practice and customs, many of which depend on healthy environments and abundant natural resources (see Box 6.1). This is not an automatic panacea; not all traditional practices work, nor is all Western conservation successful (Jupiter, 2017). True partnerships and mutual learning between all stakeholders, combining the best of traditions and traditional knowledge with the new knowledge that science and conservation practice bring, can perhaps result in win-win situations of successful conservation and sustainable development (Artis et al., 2020) and thus contribute to well-being. But, as this chapter will show, the evidence base so far is rather thin and much more research on the links between well-being and effective and equitable protection are needed.

Despite this lack of research, there is a growing realisation by conservation practitioners that conservation cannot be divorced from sustainable development and well-being and that conservation in some places can be more about managing and reducing threats to biodiversity through social development than managing biodiversity itself (see Case study 6.1). For example, the tropical island nations of Oceania are particularly associated with the ecosystem services from surrounding coral reefs, such as protection from storms, food provisioning, maintenance of cultural practices and revenue from tourism (Friedlander et al., 2017). The importance of these services, as this chapter will demonstrate, go far beyond just these iconic reefs. In Papua New Guinea, for example, 75–80% of the population depend on natural resources from across the landscape and seascape for their livelihoods, which provides a persuasive argument for their protection (CEPA, 2019).

BOX 6.1 PLACE-ATTACHMENT AND CONSERVATION IN OCEANIA

Stacy Jupiter

> Indigenous peoples do not just belong to a place; rather, they often see themselves as embodying place itself. The terms *whenua* (Aotearoa), *enua* (Vanuatu), *fonua* (Tonga) and *vanua* (Fiji), for example, refer both to the land and to an ancestral connection to the land. Words for land and dirt are often synonymous with words for placenta (*whenua, enua, fonua, vanua*) and as such suggest that life and land are intrinsically connected. For myriad Pacific cultures, the common practice of returning the placenta to the earth further embeds this notion of being of the land. Such a connection means that any radical transformation of the land or separation from it – be it through voluntary or involuntary displacement – is likely to be a catalyst for profound identity loss. (Tiatia-Seath et al., 2020, pp. 401–402)

Place-attachment is a fundamental, but often overlooked, component of well-being in Oceania. When Oceania peoples speak of embodying a place, this is implicit of connections to the land and the sea, and with all those who have come before and future generations who bear these connections. Local and traditional knowledges are derived from these connections, enabling cultural practice, including the sound stewardship of environmental spaces and resources. Stewardship is often regarded as an important responsibility in the reciprocal relationship many Islanders have with their places.

These values are implicitly well recognised across Oceania, but within the past few years there has been some concern that international frameworks that set the global standards for measuring indicators of well-being (e.g. Sustainable Development Goals, SDGs) may be missing or misrepresenting these critical dimensions of well-being (Sterling et al., 2020). In recognition of this, recent work has been undertaken using focal group discussions with managers, practitioners and community representatives to try to gain consensus on what it means to have 'a good life' in the context of Oceania (e.g. McCarter et al., 2018; Dacks et al., 2019), with the intention of highlighting these values to inform sound sustainable development and conservation planning and decision-making.

Through six workshops held in Fiji, Hawai'i, Republic of the Marshall Islands, Solomon Islands and French Polynesia, participant ideas and perceptions of well-being converged around eight critical dimensions (see below figure), most of which depend on access to and availability of natural resources and environmental quality (Dacks et al., 2019; Sterling et al., 2020). These linkages to natural systems underpin delivery of ecosystem services that support Pacific Island food security, livelihoods, health and cultural practice (e.g. Friedlander et al., 2017; Pascua et al., 2017; McFarlane et al., 2019). Continued and effective delivery of these critical ecosystem services is dependent on maintenance of healthy environments and abundant resources, which can be achieved through protected and conserved areas, embedded within sustainably managed land- and seascapes. Strengthening well-being elements, in particular related to connections between people and place and indigenous and local knowledge, can incentivise pro-conservation behaviour by motivating people to look after their lands and seas as a social responsibility to enable future generations to undertake cultural practice (Berkes, 2012).

Human health

Environmental state

Connectedness to people and place

Indigenous and local knowledge, skills, practice, values and worldviews

Access to natural and cultural resources

Access to financial resources, infrastructure and services

Sustainability management

Education

Eight dimensions that capture critical elements of Pacific Island perceptions of well-being. *Source: Sterling et al. (2020)*

Based on these outcomes, guidance has been developed for decision-makers on how to develop culturally attuned monitoring and reporting indicators to better ensure that conservation and development is programmed in ways that support rather than undermine local conceptualisations of well-being (Assessing Biocultural Indicators Working Group, 2019). In Oceania, this means focusing attention in particular on indicators related to place-attachment (e.g. perceptions of the degree to which community members follow locally appropriate cultural norms) and indigenous knowledge systems (e.g. knowledge of places forbidden for certain persons) (Dacks et al., 2019). Such indicators can be used, for example, within protected and conserved area management effectiveness assessments (see Chapter 4), in Voluntary National Reviews to document progress against the SDGs, or in national sustainable development frameworks, such as 'Vanuatu 2030: The People's Plan' (DSPPAC, 2017).

A comparison of elements of these eight dimensions against the indicators in the SDG framework found large gaps in particular with respect to recognition of the importance of connectedness to people and place and indigenous and local knowledge, skills, practice, values and worldviews. *Source: Dacks et al. (2019) and Sterling et al. (2020)*

The Tenkile tree kangaroo (*Dendrolagus scottae*) captured by a camera trap in Torricelli Mountain Range (© TCA)

CASE STUDY 6.1 INTEGRATING CONSERVATION AND DEVELOPMENT IN PAPUA NEW GUINEA

Jean and Jim Thomas

The Tenkile Conservation Alliance (TCA) was established via a workshop on tree kangaroos held by the Conservation Planning Specialist Group of the IUCN Species Survival Commission in Lae, Papua New Guinea (PNG) in 1998. This workshop concluded that the Tenkile Tree Kangaroo (*Dendrolagus scottae*) was the most threatened of all tree kangaroos and that it needed immediate attention. Consisting of experts from international zoos, the PNG National Museum and Art Gallery, local government and individuals, TCA was registered in 2001. Since then, TCA has expanded to include the recovery of the Critically Endangered Weimang Tree Kangaroo (*Dendrolagus pulcherrimus*) and protection of the Torricelli Mountain Range, which has involved working with more than 50 villages.

It became apparent early on that the conservation of these extraordinary species required the assistance of the people. Over-harvesting by an increasing human population was the key threat to tree kangaroo population decline. If TCA did not work directly with the people to understand their issues and problems, then all of the work done with tree kangaroos was purely adding to previous research. As a conservation organisation, TCA had to transition from the original approach of providing environmental education programmes and conducting research to developing sustainable community development and livelihood programmes. Upon entering a community for the first time, TCA focused on listening. Repeatedly, the community representatives complained of three major issues: water supply, housing and electricity. TCA began supplying communities with water tank sets and tin roofs for houses from 2004 until the present. These have been very large programmes and funded by different sources – mostly the European Union, Global Environment Facility (GEF) and the Australian Government. To date, TCA has delivered 370 water tanks throughout the project area, supplied tin roofing to 800 houses and had villages build one toilet per household – 2,690 households. TCA has supplied solar units, computers, smartphones and internet to more than 40 of its staff. This is huge progress for the grassroots landowners and communities of the Torricelli Mountain Range. No other in-situ NGO has had this level of success and impact in rural Papua New Guinea.

Community rangers (© TCA)

The result of all of this effort is that the water tanks and tin roofing are a daily and constant reminder of TCA's presence, representing the strong connection that TCA has with the landowners and communities. Relationship building has been paramount. TCA has delivered tangible benefits that are meaningful and life changing to local people, and has built trust – which has been critical to achieving not only community development outcomes but also conservation success. The tenkile and weimang tree-kangaroos have not been hunted in the area for more than a decade and their populations have increased as a result of the key threatening process (human hunting) being removed.

Addressing poverty and basic human rights are essential for in-situ conservation in all areas of the world from TCA's experience and on-ground perspective. If you don't partner with the local people, you have no chance of saving what is left. Conservation organisations and the people who work for them need to see themselves as enablers and drivers of change, not just as researchers and educators. Conservation needs a paradigm shift from flag waving and advocacy to implementing the plans that are written, taking action and achieving outcomes. TCA's example and model are unique and can assist with better conservation and related initiatives. TCA is mentoring other conservation groups within Oceania and the organisation's reach is now global. Please visit www.tenkile.com for a boost!

6.2.1 WHAT DO NATURAL ECOSYSTEMS PROVIDE?

There are lots of ways to break down the benefits that we derive from natural ecosystems that contribute to our overall well-being. The Millennium Ecosystem Assessment (MEA) used a simple four-part typology which is still useful, albeit there are some fuzzy areas and overlaps (see Figure 6.1).

Supporting services support the critical biological functions that keep life going, but which we often forget about or take for granted, particularly some climatic phenomena, soil formation, nutrient recycling and the primary productivity derived from photosynthesis of solar energy. While all these take place throughout the world, they operate most efficiently in natural or near-natural ecosystems and loss of some of these would cause massive disruption to biological functions and human well-being.

Soil erosion is already a global problem, degrading many areas of farmland, with natural ecosystems helping to replace this soil and reduce the rates of loss. We have as yet no means of replacing these ecological functions on anything like the scale needed to drive life on the planet.

Cultural services range from spiritual and religious values through recreation, aesthetic values, educational, cultural heritage and more subtle appreciation of and connectedness to place (Verschuuren et al., 2021). Some of these values are easy to comprehend and even to assign a hard economic value, such as the benefits of ecotourism to hotels, guides and associated businesses (Stolton et al., 2021). Others are intensely local and personal in value, such as sacred sites and landscapes important to a single community or the historical, familial or religious links to a certain place relevant to one person or family.

Provisioning services include the supply of food, freshwater, medicines, fuelwood, fibres and other biochemical and genetic resources. It is here that protected and conserved areas play a much more recognisable role; both in terms of sustainable use, well-being and conservation of resources. There is a solid body of evidence demonstrating how marine protected areas (MPAs) enable recovery of targeted fishery species (e.g. Halpern, 2003); with the most biodiversity benefits

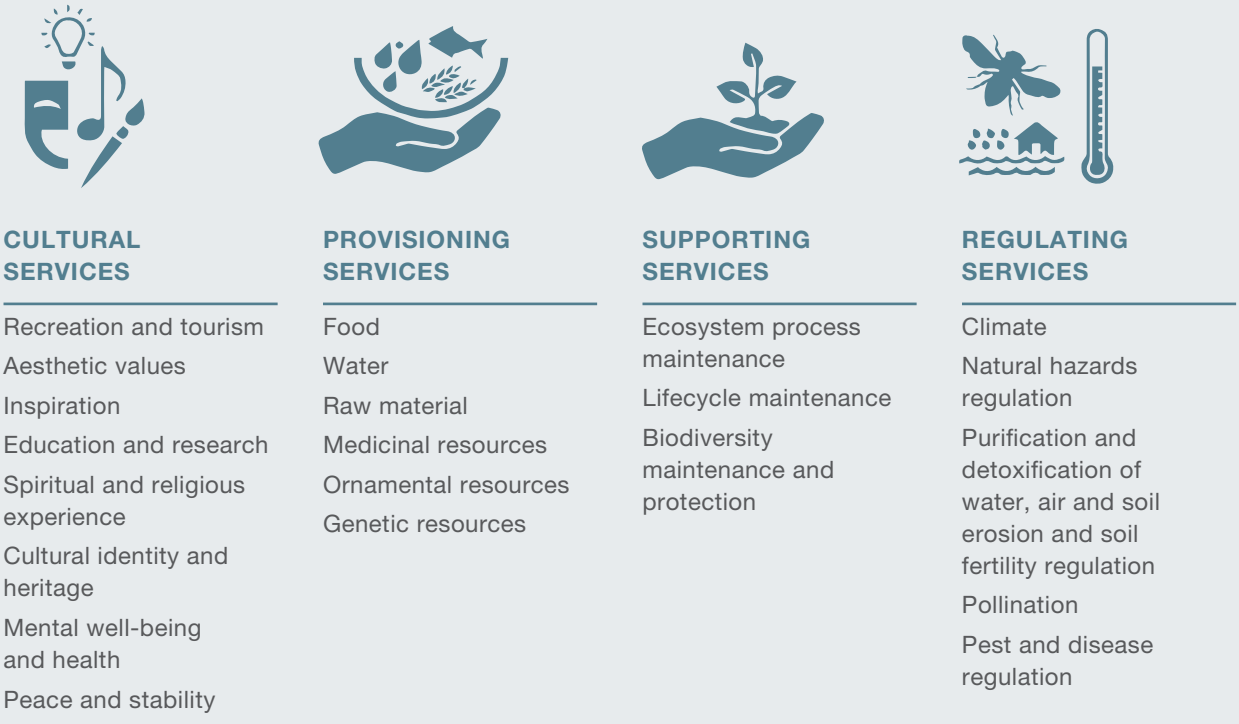


FIGURE 6.1 Ecosystem services and related goods.
Source: Adapted from multiple sources including the Millennium Ecosystem Assessment (2005)

realised in areas fully closed to fishing and other human uses (Sala & Giakoumi, 2018; Sciberras et al., 2015), though fishing grounds that include periodically harvested closures may be better able to simultaneously maximise benefits for stocks, yield and catch efficiency (Carvalho et al., 2019). On land, access and benefit sharing mechanisms in many protected areas maintain local communities' ability to harvest valuable wild foods (see Case study 6.1) and medicinal herbs, whilst conservation management ensures that the level of exploitation does not degrade the resource. Forests on mountaintops filter water from the air and increase net downstream flow – creating so-called 'water towers' – thus helping to provide sufficient freshwater for communities.

While provisioning is important, researchers are gradually coming to see that the regulating services provided by natural ecosystems may be even more critical in many cases. Regulation in this case embraces climate regulation, water regulation and purification, disease regulation, pollination and other aspects of food security and various forms of disaster risk reduction. These are classic 'hidden benefits' of natural ecosystems, often taken for granted until the ecosystem is lost or degraded and the impacts on biodiversity and well-being become all too apparent.

MPAs can support local fisheries (© Stacy Jupiter/WCS)

6.2.2 HOW PROTECTED AND CONSERVED AREAS HELP TO MAINTAIN AND MANAGE ECOSYSTEM SERVICES

The benefits described above all rely on natural ecosystems. Any natural ecosystem will provide services, but protected and conserved areas, particularly when embedded within managed land- and seascapes, are useful in this context because they have proved to be uniquely placed to maintain natural ecosystem functions over time. Management of natural areas does not necessarily mean just setting them aside; existing pressures, past damage and the newly emergent pressures from climate and other forms of environmental change mean that many 'natural' areas will need careful management if they are to retain desired values in the future. Many areas will also inevitably change, perhaps dramatically, so old management approaches may no longer work (Stolton & Dudley, 2010).

Across much of Oceania, the mix of conservation and resource use management in the protected and conserved network already illustrates these links. Much of the existing protected area legislation in the Pacific, for example, provides provisions for sustainable use within some protected area categories (Chapter 3), and many communities, for example, across the region have long recognised the value of setting aside a proportion of their marine estate as sanctuaries to ensure that their fish stocks remain viable (Govan, 2015). There is also a long tradition of temporary closures to help rebuild fisheries stocks or terrestrial plants and animals, often followed by a rapid harvest when numbers have been rebuilt (Cohen & Foale, 2013; Whitmore et al., 2016).

Mud Crabs ready for selling (*Scylla serrata*) (© Tom Vierus)

These management measures generally do not have conservation as a primary objective, but can certainly produce co-benefits for biodiversity if harvesting is kept within sustainable limits (e.g. Carvalho et al., 2019). They have the great advantage of already being recognised and supported by many communities, making uptake simpler, and have proven to be effective in maintaining populations of key species over time. However, they also have some disadvantages, often having limited impacts on species which are vulnerable to overexploitation given their life history characteristics (Goetze et al., 2016). A wide range of approaches are thus needed, and agreeing which management and governance option is suitable in a particular situation will often need extensive research and debate.

6.2.3 WHO BENEFITS?

Many of the benefits sketched out above directly support the well-being of people who live in the area – indigenous peoples, local communities and others. But other benefits will be far more widely dispersed, impacting a wider national, regional or even global community. Anyone who has talked about protected area benefits with local communities will recognise the problem of comparing local and global benefits and well-being. While things like fish stocks, herbal medicines and coastal protection are immediately obvious, the role of vegetation in carbon sequestration is likely to be regarded as fairly irrelevant on a community level unless they are receiving payments through carbon markets. Similarly, downstream water quality may also be less convincing, affecting people kilometres away, and thus potentially less relevant to those living in the watershed itself. This means that while many decision-making powers rightly should fall to local communities, governments still have a role in providing a strong policy and legal framework to ensure that decisions support the collective good as well as the individual desires or solely local considerations.

Getting the balance between these is tricky; neither stifling individual imagination and initiative, nor allowing powerful people to exploit ecosystems in ways that undermine the rights and benefits of the majority. In reality, decisions on land, water and sea use involve multiple actors, a certain amount of trade-off and compromise on all sides and continual evaluation so that changes can be made if a management regime proves to be less successful than hoped. Various tools for better understanding the benefits from protected and conserved areas can contribute to decision-making (Box 6.2), as can a greater focus on the impacts of protected and conserved areas on local livelihoods and well-being (Box 6.3).

BOX 6.2 UNDERSTANDING PROTECTED AREAS

Various tools exist to help identify the costs and benefits of protected areas. The Social Assessment of Protected Areas (SAPA) methodology works with local stakeholders and rightsholders to identify impacts of protected areas on local livelihoods (Franks & Small, 2016). The Protected Area Benefits Assessment Tool (PA-BAT) also uses a workshop approach with local and sometimes more distant stakeholders to determine the actual and potential benefits, mainly ecosystem services, derived from a protected area (Ivanić et al., 2020). Asking stakeholder opinions is unfortunately still quite rare in the management of protected and conserved areas but can pay dividends in terms of building stronger community relationships, strengthening management and supporting well-being.

BOX 6.3 UNDERSTANDING THE BENEFITS OF PROTECTED AND CONSERVED AREAS

The value of benefits can be assessed at three levels: qualitative, quantitative and monetary (Kettunen & ten Brink, 2013). Qualitative valuation covers the value and benefit of protected areas in general terms; for example, by describing the role of a protected area in supporting local culture and identity. Quantitative indicators of values and benefits include numerical data, for example, number of visitors to an area or the quantity of carbon stored in a protected area. Monetary valuation focuses on capturing or reflecting values and benefits in monetary terms; for example, by calculating the revenue generated by visitors or defining the value of carbon storage. Only a limited number of benefits can be captured through monetary indicators. IUCN WCPA has produced best practice guidelines which provide a comprehensive overview of the available methods, including the PA-BAT (see Box 6.2), and their appropriate application (Neugarten et al., 2018).

The emerging debates about the impacts of biodiversity conservation on local communities and potential negative consequences due to displacement and access restrictions (e.g. Brockington & Igoe, 2006; West et al., 2006) have led to important changes in perspective. Conservation organisations are increasingly applying rigorous environmental and social safeguards and emphasising the need to stimulate flows of economic revenues and ensure all the components of well-being (see Box 6.1) from protected and conserved areas to people living in these areas or in neighbouring communities, who otherwise can shoulder a disproportionate amount of the costs of conservation.

In Oceania, policymakers have seen the advantages of decentralised, community-based or co-management approaches to conservation, which in many instances were already in place through customary tenure. By building on existing systems, benefits have been maintained and sometimes restored to local people even where resource use and conservation options have been realigned to focus on conservation. In Tonga, for example, the development of a Special Management Area (SMA) programme, which covers roughly half of all coastal communities in the country and aims to include 100% by 2025, has granted communities exclusive access zones in exchange for implementing no-take reserves. By developing no-take reserves within the boundaries of exclusive access zones, communities are able to conserve areas of greater extractive value than they would have otherwise (Smallhorn-West et al., 2020a).

Vava'u, Tonga (© Stuart Chape)

6.3 Local well-being benefits of protected and conserved areas in Oceania

Various global reviews have documented the multifaceted benefits that protected and conserved areas can provide for local well-being (e.g. Ban et al., 2019; Naidoo et al., 2019), but to date there has been no regional overview of the well-being benefits of protected and conserved areas in Oceania, although there has been foundational work to understand what comprises well-being (see Box 6.1). The review below is thus necessarily piecemeal but nevertheless provides an initial overview of the importance of protected and conserved areas to well-being. Studies tend to focus on single dimensions of well-being, which is reflected in the structure below; however, a better approach would be to assess the full range of benefits (provisioning, regulating, supporting and cultural services) and the flow of these benefits, both to local communities and those further away from the protected or conserved area. More work on these issues is clearly needed, as is highlighted in the section below and in the conclusion of this chapter, and would have the dual benefit of supporting conservation and well-being.

ECONOMIC VALUATION: There have been multiple environmental service valuations in the region, typically focused on marine systems. The Marine Biodiversity Conservation in the South Pacific (MACBIO) project evaluated marine ecosystem services for Fiji, Vanuatu, Tonga, Kiribati and Solomon Islands (e.g. Pascal et al., 2015; Gonzalez & Ram-Bidesi, 2015). These studies estimated an annual economic value ranging from US$21.6 million for Tonga to US$ 345.8 million for Kiribati. Studies like these can be controversial, however, in that some people react against the concept of giving nature an economic value. They have, however, played a role in Oceania in convincing political leaders that natural values are significant, and stimulated support for marine spatial planning processes and networks of marine protected areas. They also help show where values are being lost to local communities. In Kiribati, at least three-quarters of the ecosystem service value is in the form of tuna fisheries, mostly caught by foreign fleets for export (Rouatu et al., 2015).

FOOD SECURITY: Improved food security is commonly touted as a benefit of protected and conserved areas, often in order to gain public buy-in. In reality, food security is exceedingly complex to measure as it deals with equitable access to quality, nutritious foods that enables all people to meet their nutrition needs and enjoy a healthy lifestyle (Barrett, 2010). Thus, complete measurement of food security as a state of being requires separate measures of access, equity, caloric and nutrient consumption, and food preferences, among other variables, which is challenging to carry out in practice. In fact, a systematic review of approaches to measure food security benefits associated with terrestrial protected areas found that it is a poorly studied topic, with most studies providing only snapshot findings rather than evaluating temporal trends of households associated with protected areas versus counterfactuals, where there are similar conditions but there has been no management intervention (Jouzi et al., 2020).

There are various studies, however, that have indicated that protected and conserved areas in Oceania can result in enhanced production of wild food sources, and there is some evidence to suggest that this food supply can provide nutritional benefits. A review of evidence suggests that no-take closures within Locally-Managed Marine Areas (LMMAs) can, under certain conditions, be effective for rebuilding stocks of targeted fish and invertebrates, though provision of food benefits is highly dependent on fishers' access to these stocks (Jupiter et al., 2014b; Case study 6.2). A meta-analysis of outcomes from periodically harvested closures within LMMAs, largely from Oceania, also demonstrated potential for food benefits: on average, targeted fish biomass was 98% greater within closures compared to areas within broader LMMA (Goetze et al., 2018), yielding tangible harvest benefits that can provision for cultural feasts (and provide a source of cash; e.g. Cohen & Alexander, 2013). Several studies from Solomon Islands have produced data indicating improved nutrition in residents of communities employing marine management within LMMAs (e.g. Weiant & Aswani, 2006; Aswani & Furusawa, 2007), but causal links are not yet well understood or demonstrated. Smallhorn-West et al. (2020b), in a systematic review of benefits derived from LMMAs in Oceania, have specifically called for more counterfactual thinking to be able to more conclusively demonstrate drivers behind outcomes.


Upper Navua Conservation Area, Fiji (© Adi Nacola)

There are fewer examples of terrestrial protected and conserved areas in Oceania that have been explicitly established with an objective to improve food sources from wildlife. Whitmore et al. (2016) demonstrate that periodic closures (*tambu*) of forests to hunting of Admiralty cuscus (*Spilocuscus kraemeri*) in Papua New Guinea could potentially be a sustainable strategy for population management, though given the extent of the species' home ranges, this form of conserved area is likely to only be effective if intact forest corridors are maintained and *tambu* areas are networked (Lamaris & Whitmore, 2018). The YUS Conservation Area in Papua New Guinea, designed to protect populations of Matschie's tree kangaroo (*Dendrolagus matschiei*), includes a no-take zone and an adjacent hunting zone, where dispersing animals can be captured (Box 3.2). However, analysis of perception data from landowners within the YUS landscape suggest that hunting has decreased since conservation area establishment, while people think animal abundance has increased and residents report consuming more livestock than wild meat (Williams et al., 2021), making estimations of changes in food security more complex.

WATER SECURITY: Various efforts have been made to formally and informally protect water catchments in Oceania under the recognition that human disturbance around water sources can compromise the safety and security of water supplies (e.g. Wenger et al., 2018), but again a systematic analysis is missing. In Solomon Islands, for instance, water draining from the Kovi/Kongulai catchments supplies water to 50–60% of the population of the nation's capital, Honiara. Through a Global Environment Facility (GEF) Integrated Water Resources Management project, various partners assisted the watershed landowners to develop an ecotourism plan to motivate management of the area[43]. The Watershed Interventions for Systems Health in Fiji (WISH Fiji) project has similarly worked with landowners from 29 villages across five river basins to identify important areas around primary drinking water sources for local designation as forest conserved areas (McFarlane et al., 2019). Landowners were prompted to take action after growing awareness linking human activities in watersheds to downstream public health risks and degradation of resources (e.g. Jenkins et al., 2010; Jenkins et al., 2016), as well as primary data collected from watersheds indicating specific health risks from water-related disease, such as leptospirosis, typhoid and dengue.

LIVELIHOODS: Protected and conserved areas have potential to enhance local livelihoods in a variety of ways, including through direct employment, tourism-associated revenue, increased availability of resources, market-based instruments and through introduced income-generating programmes designed to incentivise engagement with management and reduce non-compliance. Again there are no comprehensive data available for the number of people formally or informally employed across protected and conserved areas in Oceania, although some limited data are available. The National Trust of Fiji, for example, is a statutory body funded jointly by the government, philanthropic donors and multilateral projects that was established in 1970 with a mandate to provide for the protection of Fiji's natural, cultural and national heritage. The National Trust employs 18 staff to manage eight heritage sites, as well as community volunteers or volunteer rangers who are recruited on a short-term basis as needed (E. Erasito, pers. comm.). In Palau, the Protected Areas Network (PAN), established in 2003 as a part of the Micronesia Challenge, created employment through the PAN Office, PAN Fund and management positions at each of its 34 sites across all 15 states (MNRET, n.d.).

Revenue associated with tourism to Oceania's protected and conserved areas has been an important contributor to local livelihoods (Case study 6.3). Tourism in Palau makes up some 40% of overall employment (Friedlander et al., 2017), with many tourists specifically visiting for experiences associated with Palau's natural heritage. For example, the shark diving industry which makes use of Palau's marine protected areas generates US$18 million per year (approximately 8% of the gross domestic product of the country), US$1.2 million a year in salaries to the local community and US$1.5 million in taxes to the government (Vianna et al., 2012). Tourism is a main driver of many conservation agreements in Oceania, both marine (e.g. Mangubhai et al., 2020) and terrestrial, such as the Upper Navua Conservation Area, a Ramsar site (Snyman & Bricker, 2019), as it can bring revenue from entry fees, cash payments to cease extraction of resources, and markets for local goods (Horowitz, 2008; Jupiter et al., 2014b). However, the benefits of tourism arising from protected and conserved areas may not be equitably distributed (Fabinyi, 2010), generally do not reach remote communities (Jupiter et al., 2014b), and are particularly vulnerable to global shocks, such as the recent COVID-19 pandemic (Hockings et al., 2020).

Implementing partners for conservation and natural resource management projects have also often introduced a range of livelihoods activities across Oceania, which may or may not have specific associations with protected and conserved areas, to incentivise their establishment and engagement with management. In describing lessons from implementing a five-year, GEF forest protected areas project across multiple countries in Oceania, Scherl and Hahn (2017) note that introduction of livelihood activities can be an effective entry-point into communities, motivating their participation in, and acceptance of, conservation action. For example, in

[43] https://www.pacific-r2r.org/sites/default/files/2020-03/GEF-Pacific-IWRM-Final%20Report-Solomon-Islands.pdf

Samoa, the GEF project supported organic farming initiatives and linked farmers to local associations to assist with marketing. The organic farms increased incomes, provided for a healthy diet within communities and helped convince landowners to establish three large protected areas (Scherl & Hahn, 2017). There has been less evidence, however, that introduced or alternative livelihoods have led to improved resource management outcomes within LMMAs (Gillett et al., 2008). Some concern has been expressed that management initiatives may fail if livelihood expectations are not met and/or conflict arises due to real or perceived inequities in how benefits are distributed (Foale, 2001; Jupiter, 2017).

The feathers and bill of the Papuan Hornbill (*Rhyticeros plicatus*) are used in traditional garments, PNG (© Stacy Jupiter/WCS)

CULTURAL PRACTICE AND IDENTITY:

Ecosystem services derived from protected and conserved areas are not wholly limited to utilitarian benefits, but embrace less tangible values including spiritual, aesthetic and cultural issues. Protected and conserved areas are often used by Oceania peoples to reinforce their ancestral connections to place, access and use resources essential to cultural practice, and strengthen the social networks that help shape cultural identity (Jupiter, 2017; Jenkins et al., 2018; Dacks et al., 2019). These values are harder to articulate and quantify, but they are often key motivators for conservation action. For example, the Hunstein Range Wildlife Management Area (WMA) is the largest lowland rainforest protected area in Papua New Guinea. It was declared to protect the forests of the Bahinemo people in the face of logging and mining threats. A key incentive was the fear of disturbance of the millipede shaped forest spirit (or *masalai*) that inhabits the higher reaches of Mount Samsai. The rules of the WMA specifically forbid disturbance to this and other *masalai* areas within the WMA, in support of local tradition. WMA rules also encode traditional restrictions on hunting of older pigs and megapodes and the cutting of swidden gardens (Dudley et al., 2005). In another example, the government of Kiribati established the primarily no-take (99.4% is no-take) Phoenix Islands Protected Area (PIPA) in 2008 covering over 10% of Kiribati's Exclusive Economic Zone. The protected area is valued as representing a traditional cultural value for ocean conservation, which is important to local communities' identity as I-Kiribati people. It is not a sacred site, as I-Kiribati ancestors did not live on the Islands, nor do the islands hold particular cultural value, but today PIPA is seen as culturally important because it resembles the environment of ancestors (with abundant marine life, including culturally important species such as sharks), so its protection is culturally symbolic and meaningful (Gruby et al., 2017).

HEALTH: Although disease regulation has been identified as a benefit of natural ecosystems since well before the turn of the century, until 2020 it was generally paid only lip service, a footnote in analyses of ecosystem services of interest to a few professionals. Following the COVID-19 pandemic, and the recognition that multiple other even more serious diseases could emerge from badly managed ecosystems (e.g. Plowright et al., 2021; Morand & Lajaunie, 2021), the One Health concept has suddenly gained massive, worldwide attention (Bonilla-Aldana et al., 2020). Managing human–wildlife interactions in the future may well lead to changes to many lifestyles (Allen et al., 2017), including perhaps a reduction in the hunting and sale of wild animals for food. Although there is no specific assessment on the role of protected and conserved areas in Oceania and disease regulation as yet, these issues are bound to be of more relevance in the future.

CLIMATE RESILIENCE: Similarly, the role of protected and conserved areas in regulating climate was only really recognised about a decade ago. For Oceania, the role of natural vegetation in mitigating climate-related disasters is of particular interest. This includes, in particular, the role of coastal mangroves and coral reefs in protecting against storms and tsunamis (e.g. Jenkins & Jupiter, 2015) and the fact that mountain forests can help to stop landslides and catastrophic flooding (Alamgir et al., 2019). As climate change increases, disruption to weather patterns are likely to become both more frequent and more extreme, meaning that communities need to plan for increased pressures from extreme weather events. At the same time these weather events are being exacerbated by land use change. On the island of New Guinea, for example, conversion of forests is interacting with increased frequency of El Niño events, resulting in forest fires that create a negative feedback cycle that leads to more drought-like conditions, thus exacerbating fire damage and impact on agricultural productivity (Jacka, 2009).

Natural ecosystems thus protect us from climate change impacts and help us to adapt to climate change and secure well-being. In addition, protected and conserved areas can directly store and sequester carbon and other greenhouse gases, thus reducing the rate at which climate change is taking place. In heavily forested islands, like Papua New Guinea and Vanuatu, carbon storage will become an increasingly important justification for setting aside protected and conserved areas (Vincent et al., 2015; Laffoley, 2013.). For example, the creation of the Port Resolution Marine Protected Area in Vanuatu was motivated in part by the community's desire to buffer themselves from the impacts of climate change (Buckwell et al., 2020).

CARBON MARKETS: Associated with the increasing impacts of climate change are the various initiatives trialled across Oceania to improve livelihoods and incentivise conservation through the establishment of carbon markets in exchange for forest protection through site-based Reducing Emissions from Deforestation and forest Degradation (REDD+) projects, and interest in blue carbon projects is on the rise. While various challenges exist, including institutional arrangements, weak forest governance, negotiating land tenure and carbon rights, site verification, and developing equitable and accessible benefits sharing platforms (Clements, 2010; Babon et al., 2014; Moraes, 2019), there are some active projects in the region where income benefits from carbon trading are flowing to landowners. For instance, the Nakau Programme[44] supports three site-based REDD+ projects in: Drawa, Fiji, a national priority forest for conservation; Babatana, Solomon Islands, a Key Biodiversity Area; and Loru, Vanuatu, habitat for the threatened Vanuatu megapode (*Megapodius layardi*). An in-depth assessment of the Loru site found that local project ownership and a strong institutional framework mitigated risks (e.g. of elite capture of benefits) and provided measurable social and environmental benefits (Payne, 2020).

[44] www.nakau.org

CASE STUDY 6.2 VUETI NAVAKAVU LOCALLY-MANAGED MARINE AREA, FIJI[45]

The Muaivuso Peninsula in Fiji is surrounded by a fringing coral reef, mangroves and remnants of coastal littoral forest providing important habitat for biodiversity, including many species important for local fisheries. Muaivuso households rely heavily on fishing for both sustenance and income; roughly 40% of the fish caught provide nutrition for Navakavu households, the remaining 60% are sold in the market (O'Garra, 2012.)

In 2002, responding to declines in catches, the communities in the traditional fishing ground (or *qoliqoli*) for four villages: Nabaka, Nammakala, Muaivuso and Waiqanake decided to set up a 'no-take zone'. Whilst Fiji is one of the more affluent countries of the South Pacific, these four villages are relatively poor (in 2007 the average income here was less than half the Fijian average) (Beukering et al., 2007).

The Vueti Navakavu Locally-Managed Marine Area (LMMA) was set up with support from the Fiji LMMA network and the University of the South Pacific. All fishing and other extractive activities are prohibited within the LMMA, but the spill-over effects now replenish fish stocks in the surrounding traditional fishing grounds (over which the four villages have exclusive use rights). The results have been impressive. Within four years of establishment of the no-take zone, community finfish catches increased by 3% (IUCN, 2009). A study a decade later found fishing grounds realised a catch of 215,000 kg of seasonal and non-seasonal catch each year. Sixty per cent of this was sold generating just over US$475,000 for the communities each year – on average just under US$4,300 per household. In addition, fisheries provide households with around 86,000 kg of protein a year (O'Garra, 2012) and the mangrove and reefs also provide coastal protection against storm surges and erosion; a significant indirect use value in an area where cyclones and tropical storms occur frequently (O'Garra, 2007).

[45] This case study is based on data collected for the report: Stolton, S., Timmins, H. and Dudley, N. (2021). *Making Money Local: Can Protected Areas Deliver Both Economic Benefits and Conservation Objectives?* Technical Series 94. Montreal: Secretariat of the Convention on Biological Diversity.

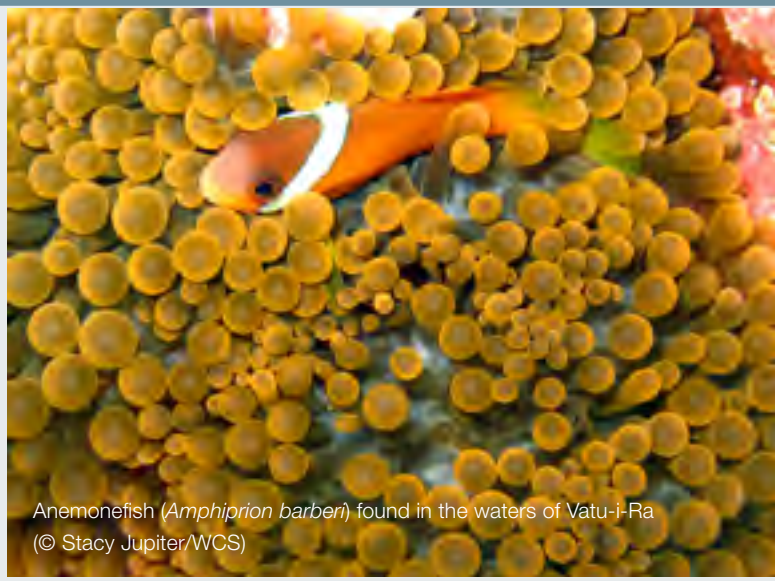
CASE STUDY 6.3 VATU-I-RA CONSERVATION PARK

Sangeeta Mangubhai, Wildlife Conservation Society, Fiji

The Vatu-i-Ra Conservation Park (VIRCP) was first set up as a *tabu* area (75 km^2) in 2012 by the 28 villages of Nakorotubu District in Ra Province. The Park was extended in 2015 and now covers 110.5 km^2 of barrier reefs, slopes, passages, deep ocean, as well as Vatu-i-Ra Island (0.023 km^2 land cover), which supports large regionally significant breeding colonies of seabirds. The VIRCP was established as a 'marine conservation agreement' between local communities and tourism operators, facilitated by the Ra Provincial Office and the Wildlife Conservation Society (WCS), with technical inputs from local and international NGOs.

A management plan was launched in 2018 which stipulates the objectives for the Park are to: (a) protect the unique biodiversity of the island and the surrounding reefs; (b) protect the unique cultural history of the area; (c) protect critical breeding grounds for fish so that the 'spillover' from this Park supports community fisheries in the adjacent customary fishing ground; (d) establish a voluntary mechanism through sustainable tourism, that will ensure the sustainable financing of the Park while supporting the sustainable development of resource owners; and (e) to establish the VIRCP as the leading 'marine park' for Fiji and the wider South Pacific. The management plan sits under the large umbrella of an Integrated Coastal Management Plan for Ra Province.

All visitors to the VIRCP are offered the opportunity to make a voluntary contribution (currently FJ$15/person/year) to a trust being set up to support the day-to-day management of the Park (30% of funds), and an education fund for secondary and tertiary level students (70% of funds). Additional donations are not subject to the 30:70 allocations, and can be allocated to either, based on need. Funds raised from the Park provided education grants to 17 students in 2018, 26 students in 2019 and 20 students from the area will receive grants in 2021. A trust deed has been established to manage the funds generated by the Park, overseen by a board of trustees. A seven-member management committee provides advice and oversees the management of the Park and selection process for the education fund. A website and partnership programme was launched in 2019[46] to help raise the profile of the Park and to encourage other tourism operators to join and contribute.



Anemonefish (*Amphiprion barberi*) found in the waters of Vatu-i-Ra (© Stacy Jupiter/WCS)

Coral reef monitoring is currently funded and conducted by the WCS. Coral communities in the southern part of the Park were damaged by Category 5 Cyclone Winston in 2016 but have shown remarkable recovery in four years. Coral reefs in the northern part of the Park, popular with dive tourists, were undamaged from the cyclone and continue to flourish providing some of the best diving in Fiji.

The reefs are 15 km offshore and as such have some natural protection from most local community subsistence fishing but are vulnerable to large fishing boats from the mainland. Small-scale commercial fishers sometimes make camp on Vatu-i-Ra Island while fishing in the area. Since BirdLife International and NatureFiji-MareqetiViti funded and carried out a rat eradication programme on Vatu-i-Ra Island to protect nesting seabirds, boats have been banned from landing and a biosecurity protocol has been developed. With the formation of the *tabu* area and launch of the Park, fishing licences for the area are no longer being issued. In 2020, a number of community representatives were trained as fish wardens, and a boat was purchased in 2021 to support local patrols. It is not known if the money generated through voluntary contributions will be sufficient to cover the costs of monitoring or surveillance in the future. Pre-COVID-19, estimates of the voluntary contributions ranged from FJ$15,000–35,000/year.

[46] www.vatu-i-ra.org/

6.4 Conclusion

Across Oceania, many of the traditions on which societies have been established have had close relationships with sustainable use, making the links between conservation and well-being a function of society, not two separated issues. More than 75% of people in the Pacific Islands reside in rural communities based on customary ownership of land and marine resources and traditional leadership and organisation (Govan, 2015). However, traditions are in decline in many areas, and what was sustainable in the past may no longer be sustainable today as threats to biodiversity mount and cultural norms change (e.g. Republic of the Marshall Islands, 2017). Increasing population is a serious threat to sustainable management, as the need for more food, shelter and firewood puts more pressure on natural resources. Maintaining ecosystem services in the future will therefore require a mixture of traditional methods and new thinking, to ensure that knowledge, genetic diversity and human well-being benefits are not lost in a rush to modernity. Active participation of resource owners in conservation and management initiatives can ensure long-term sustainability, well-being and success of biodiversity conservation. We suggest that the following approaches are vital for realising these benefits in the region:

- Adopt a biocultural approach: Biocultural approaches that give local people a legitimately recognised, equal voice in designing, implementing and monitoring protected and conserved areas through participatory, knowledge co-production approaches are essential to ensure that conservation action supports rather than undermines local conceptualisations of well-being (Sterling et al., 2017; McCarter et al., 2018; Sterling et al., 2020). Through these approaches, it is important that expected benefits to all parties are clearly articulated, realistic, equitable and managed transparently (Chapter 3; Jupiter, 2017; Stolton et al., 2021).
- Link stakeholders and rightsholders: The most successful protected and conserved areas are those where managers, local governance institutions, communities, businesses and other relevant stakeholders and rightsholders work in harmony together. This can usually only happen if appropriate governance and equity measures are in place (Chapter 3). Links between business and protected areas, without bringing in local communities, can be successful in terms of making money as in ecotourism ventures, but not necessarily provide as much as they could for local livelihoods and well-being, resulting in lack of equity (Stolton et al., 2021).
- Safeguard conservation and rights: Any economic activities and other well-being/livelihood focused activities in protected and conserved areas should be established within a framework of safeguards, policies and standards, applied within the context of local values and norms, to ensure they do not undermine conservation objectives or the rights of indigenous peoples, local and other communities (Corrigan et al., 2018; Kônig et al., 2020). Strong efforts should be made to avoid any further undermining of traditional environmental stewardship and customary tenure and local rights systems (Govan, 2015).
- Develop culturally appropriate indicators of conservation outcomes: Livelihood gains do not necessarily lead directly to improved conservation practices. Indeed, they can become drivers for increased resource use and unsustainable practices, which can eventually in turn negatively affect many of the elements that underpin local conceptualisations of well-being (Sterling et al., 2020). Knowledge co-production approaches should be used to identify culturally relevant indicators (Sterling et al., 2017; Sterling et al., 2020). Special efforts should be made to identify indicators of place-attachment (see Box 6.1), such as through connections with people and place and indigenous and local knowledge systems that incentivise pro-conservation behaviour.

- Share rights and benefits: All countries should participate in the Nagoya Protocol[47] (CBD, 2011) and have effective legislation and/or policies addressing genetic property rights and access benefit sharing agreement. Standards to ensure that any benefits are equitably distributed are also important; plenty of money-making schemes continue to support a privileged minority rather than helping to raise overall living standards (Leverington et al., 2020).
- Evaluate drivers of well-being in Oceania: More research is needed on the critical conditions that underpin well-being outcomes associated with protected and conserved areas in Oceania. A comprehensive regional assessment would provide lessons on how best to achieve co-benefits for conservation and well-being, and where attention should be focused to improve these outcomes.

Kolombangara Island, Solomon Islands (© Stacy Jupiter/WCS)

[47] The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity is an international agreement which aims at sharing the benefits arising from the utilisation of genetic resources in a fair and equitable way. It has been ratified by 130 countries worldwide. See: https://www.cbd.int/abs/

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Rock Islands, Palau (© Stuart Chape)

CHAPTER 7

SUSTAINABLE FINANCING

Manta Ray (*Mobula alfredi*), German Channel, Palau
(IUCN Photo Library / © Mandy Etpison)

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SUSTAINABLE FINANCING

CHAPTER 7

Sustainable financing

7.1 Introduction

Sufficient financial resources and suitable financial management processes are necessary for Oceania's protected and conserved areas to achieve management objectives, and sustain the delivery of ecosystem services and other benefits. In developing its Green List Standard of best practice for area-based conservation, IUCN considers finance an essential part of any long-term management strategy required for effective management, and that sites with good financial resources will have a "much higher chance of being effectively managed and achieving conservation success" (Dudley et al., 2017).

At the regional level, the draft Pacific Islands Framework for Nature Conservation and Protected Areas (2021–2025) incorporates the principle of financial sustainability as necessary for achieving global targets of the Convention on Biological Diversity through National Biodiversity Strategies and Action Plans, or NBSAPs. At national level, these NBSAPs typically incorporate strategies to achieve financial sustainability of protected area systems.

But despite these commitments, significant financing gaps still exist across Oceania, undermining efforts to effectively conserve and manage nature. While it is true that protected areas around the world suffer from inadequate financing, the situation in Oceania seems particularly pronounced, with often little core funding provided by governments. Innovative and fit-for-purpose solutions are required for the wide range of protected and conserved areas; from small community-managed areas, through to large-scale protected areas.

7.2 Assessing the need for finance

The extent of the overall financing need across Oceania's protected and conserved areas is difficult to quantify, due to a lack of formal financing assessments and analyses of both conservation expenditure and need. Globally, various methodologies have been used to evaluate protected area finance needs, at site, network and national levels. UNDP's Biodiversity Finance Initiative (BIOFIN) framework (UNDP, 2018) supports countries with a methodology to measure current biodiversity expenditures, assess financial needs and identify the most suitable finance solutions to address identified finance 'gaps' (including those in protected areas), as illustrated in Figure 7.1.

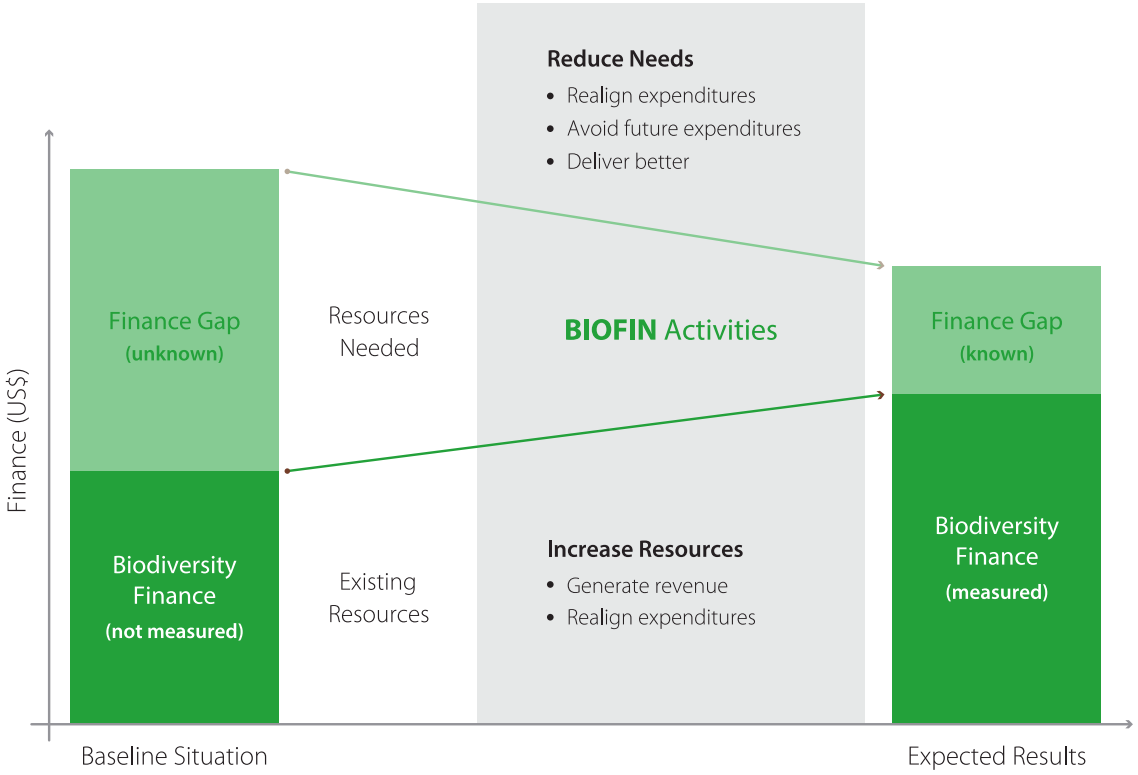

FIGURE 7.1 The BIOFIN approach. *Source: UNDP (2018)*

Within the region, only Fiji has trialled the BIOFIN framework to date. It has conducted reviews of policy and institutional settings, and biodiversity expenditure, and from these assessments prioritised green bonds and tourism fees as two feasible finance solutions. Of these options, tourism fees are the most relevant to Fiji's protected areas, with several fee systems already in place (Mangubhai et al., 2020).

Management effectiveness evaluations conducted in Papua New Guinea examined current expenditures (Leverington et al., 2017): 83% of protected areas assessed reported no annual government budget for protected area management, and 91% had no budget security into the future (see Section 4.6). That is not to say that there were no funds for management; some sites fundraised within their communities, while others raised revenues from nature tourism. 'Alternative' income schemes suffered from prohibitive market access challenges, and low commodity prices. The three protected areas that were able to demonstrate sufficient budget were all dependent on external funding sources including Australian War Memorial funding, and an endowment fund managed by a foreign zoo (Leverington et al., 2017). Eighty-six per cent of protected areas assessed had few to no paid staff, with voluntary labour by customary landowners playing a more important role in management.

Some progress has been made on understanding financing needs in the region. Needs assessments are usually required in the process to create conservation trust funds. As an example, the Micronesia Challenge business planning process helped Palau to identify an annual national conservation budgetary requirement of US$3.2m, of which it is able to secure US$2.7m through internal budgets, including tourism revenues (Micronesia Challenge, 2013). With the support of UNDP and GEF, Papua New Guinea's government has estimated the costs needed to manage the protected area network at its current extent, and for meeting the target of 17% terrestrial coverage (Koch et al., 2021). In 2021, with support from Conservation International, Timor-Leste will conduct protected area financing assessments as part of a Global Environment Facility (GEF) funded effort to establish a functioning National Protected Area system.

7.2.1 COST/AREA UNIT CONSIDERATIONS

In addition to understanding the broad protected area finance needs at country level, it is useful to understand the factors that may influence or determine the financial needs of individual protected and conserved areas. Site size has been identified as a factor for cost/area unit (Bruner et al., 2004); typically, smaller protected and conserved areas will have higher transactional and administrative costs than larger ones. Other factors may include the type of ecosystems being managed, local prices of key cost drivers (e.g. fuel, internet or salaries), or the stage of development. Costs tend to stabilise as sites approach a 'steady state', after 'one-off' establishment costs have been covered, and revenue streams activated.

Different management approaches will incur different types of costs. Large-scale marine protected areas (sometimes referred to as 'LSMPAs') are defined as MPAs with an area greater than 150,000 km^2 (Lewis et al., 2017). The vast majority of Oceania's protected and conserved area coverage is contained within these; seven such large-scale marine protected areas (< 1% of total number of sites) comprise 96% of Oceania's total protected and conserved area coverage. The multi-jurisdictional Micronesia Conservation Trust spends approximately US$11m annually to protect 6,800 km^2 across an MPA network, with a long-term target to protect 13,500 km^2 with US$21m annually – an area unit cost of US$1,555/$km^2$/y (Micronesia Challenge, 2013). Financing LSMPAs presents unique challenges; they may be remote, uninhabited or disconnected from communities, and operational costs associated with enforcement and monitoring impact may be high due to the large distances involved. Within the Pacific Regional Oceanscape Program (PROP) funded by the World Bank and the GEF, the Pacific Ocean Finance Program developed financing solutions specific to ocean financing challenges, including the funding of LSMPAs.

At the other end of the scale, Locally-Managed Marine Areas (LMMAs) are much smaller – usually in the tens or hundreds of hectares (Govan, 2009a). An estimated 500 such sites exist in Oceania. Fiji alone has more than 200 LMMAs in its network and more than 593 individual no-take-zone 'sites' (Govan, 2009b). These sites have relatively low management costs; as low as US$66/$km^2$/y for LMMAs, and their strong alignment with customary rights means that costs are usually at least partially borne by communities (Govan, 2009b).

The unit costs of terrestrial conservation may vary widely too. The Sovi Basin Trust estimates its annual operating costs to be US$627/$km^2$/y (Erasito, E. pers. comm., 7 January 2020). Also in Fiji, the Kilaka Forest Conservation Area reported annual operating costs of US$5,117/$km^2$/y, which includes Payment for Ecosystem Services (PES) royalty payments to communities, annual operational costs (US$40/ha) and administration costs (Mangubhai & Lumelume, 2019).

The lack of standardised approaches makes cost comparisons difficult across sites. To help overcome the challenges associated with variability between sites and protected area type, benchmarking within national and regional contexts may be useful (Hockings et al., 2006), along with an open, coordinated approach to sharing protected area management costs, cost models and business plans within the Oceania region. Better understanding of costs and benefits of different types of protected and conserved areas will likely lead to more informed decision-making regarding site-based resourcing.

TABLE 7.1 Known protected and conserved area management costs, revenues and cost per area unit within Oceania

Type of protected or conserved area	Protected area	Known costs or expenditures	Cost/area unit (US$/km²/year)
Large-scale Marine Protected Area (LSMPA)	Micronesia Conservation Trust	Annual expenditure of US$11m annually to protect 6,800 km² *Source: Micronesia Challenge We Are One: Business Plan and Conservation Campaign (2013)*	US$1,617/km²/y
Locally-Managed Marine Area (LMMA)	Samoa LMMAs	Annual average expenditure across sites was US$1,344/site/y *Source: Govan (2009b)*	US$1,862/km²
	Fiji LMMAs	*Source: Govan (2009b)*	US$66/km²/y US$249 km²/y (no-take-zones only)
Terrestrial Protected Area	Sovi Basin Trust (16,340 ha)	Annual costs ▪ Management – US$188/km²/y ▪ Land lease – US$293/km²/y ▪ Community development – US$171/km²/y ▪ Total – US$653/ km² *Source: Sovi Basin Management Plan 2013, National Trust of Fiji*	US$653/km²/y (excludes Trust administration, management, monitoring costs)
	Torricelli Mountain Range Conservation Area (TMRCA), Papua New Guinea	Current PA expenditure US$500,000/y *Source: Koch et al. (2021)*	Baseline management cost – US$270/km²/y Conservative scenario – US$978/km²/y Positive scenario – US$1,815/km²/y Ambitious scenario – US$2,066/km²/y
Forest Conservation Area (PES)	Fiji Kilaka Forest Conservation Area (402 ha)	Annual costs ▪ Running costs –US$4,000/km²/y ▪ Rent – US$153/km²/y ▪ Royalties – US$938/km²/y ▪ Premium – US$26/km²/y *Source: adapted from Mangubhai and Lumelume (2019)*	US$5,117/km²/y (includes Payment for Ecosystem Services and admin costs)

Table 7.1 outlines known protected and conserved area and related management costs, as documented in peer-reviewed and grey literature. Generally, it does not include the day-to-day indirect and off-site management costs incurred by the agencies and institutions charged with protected and conserved area management. Where possible, an annual cost per unit area is derived by dividing known costs by area. Costs per area ranged widely: US$66 to US$5,117/km^2/y.

However, caution is required when comparing costs across different types of protected and conserved areas. Cost-effectiveness alone does not consider the wide range of objectives addressed by different types of protected areas; large-scale marine protected areas may be expedient in achieving global conservation goals, such as CBD Aichi Target 11 (Lewis et al., 2017), while small LMMAs may be more cost-effective in managing coastal resources for local livelihoods. And a lower cost may not be sufficient to achieve an adequate level of management effectiveness; it may simply reflect inadequate levels of government investment in protected and conserved areas. In Papua New Guinea for instance, current expenditure on the Torricelli Mountain Range Conservation Area (TMRCA) is US$270/km^2/y, mostly achieved through donor grants. But to achieve an 'ambitious scenario' of management which incorporates ecosystem restoration, increases in surface area (in step with national Aichi targets) and climate action would require increasing funding to more than 7.5 times current expenditures (Koch et al., 2021).

Torricelli Mountain Range, Papua New Guinea (© Tenkile Conservation Alliance)

7.3 Strategies and mechanisms for financing

Based on the funding needs and challenges outlined in the previous section, the following section highlights financing strategies utilised throughout Oceania, as well as new or innovative models that offer potential in the region.

In the feasibility study of finance mechanisms for the Fijian coastal province of Ra, Greenhalgh and Mangubhai (2016) identified mechanisms and instruments currently in place including tourism levies and taxes, user fees, endowments, grant systems, carbon projects and ecolabelling. They also noted the potential to introduce new mechanisms including biodiversity offsets, expanding the scope of an existing Trust fund and voluntary contribution schemes (to fund a new, permanent marine 'no-take' area). That a study focused on only one small jurisdiction revealed such a diversity of approaches is remarkable; Ra's experience demonstrates that successful financing is likely to require a number of sources and mechanisms in order to generate and manage the funds required for successful management.

The Pacific Ocean Finance Program's recent review of finance mechanisms for Community-Managed Marine Areas (CMMAs) identified three funding models with potential application in the Pacific; natural capital partnerships, blended finance for community organisations and island-wide or provincial mechanisms. The review argues that by applying a blended finance approach, community-based organisations can generate synergies across a broad range of finance sources (including grants, fees and private sector revenues) while catalysing and unlocking new sources of revenues. For example, where a community organisation demonstrates an active contribution to a Sustainable Development Goal, it could unlock additional sources of grant funding (Gigov et al., 2020).

Thus, the following examples are presented in the context that they may represent one important element within a broader financing strategy for protected and conserved areas; a strategy that may ultimately incorporate different spatial or temporal scales, and multiple finance mechanisms and funding sources.

7.3.1 FINANCING MECHANISMS

In adopting BIOFIN's standardised framework of 'finance solutions'[48], the Pacific Ocean Finance Program lists 75 unique mechanisms currently employed in marine financing in the Pacific region; its Ocean Finance Solution Register details 56 of these mechanisms currently employed in Oceania nations (Walsh, 2018). The following examples are all considered relevant to Oceania's funding needs, but should not be considered exhaustive.

TOURISM 'GREEN FEES'

The term 'green fee' is used to describe tariff systems, fees or taxes intended to collect revenues from any number of industries – including tourism – that are used to fund environmental programmes. Conservation International identified 15 green fees operating globally, including Galapagos, Palau and New Zealand in the Pacific region (Saltza, 2019). Within Oceania, green fees have been established in Palau (see below), Tonga (a cruise ship levy) and the Republic of the Marshall Islands (RMI), with sub-national tourism entry fee systems established in Fiji and Samoa (Watkins et al., 2018).

PALAU'S GREEN FEE SYSTEM[49]

The Palau Pristine Paradise Environmental Fee (PPPEF) began a decade ago as the region's first tourism green fee. Foreign tourists are charged the US$100 PPPEF, with fees collected via air ticket sales. Today's PPPEF is the main source of funds for the ongoing management of Palau's 500,000 km^2 National Marine Sanctuary and Protected Area Network (PAN); 2019 PPPEF revenues were reported at US$9.1m (Jaynes, 2019), of which approximately 40% is used to support Palau's protected areas. Protected area funds are managed by the Protected Area Network Fund (PANF) and allocated to the Palau National Marine Sanctuary (PNMS) managers of 15 PAN sites, a Fisheries Protection Fund and Palau's International Coral Reef Centre. Since its inception, funds raised through the green fee have been instrumental in helping to capitalise Palau's US$10m endowment account, held within the Micronesia Challenge Endowment Fund.

[48] https://www.biofin.org/finance-solutions

[49] Sources: Palau PAN Fund, Island Times, Saltza, 2019.

PAYMENT FOR ECOSYSTEM SERVICES (PES)

PES refers to schemes where beneficiaries of ecosystem services (such as the international community or a private entity) pay or compensate providers of those services for the value of benefits received. PES schemes may be applicable to traditionally managed or conserved areas, and to formal protected areas, such as those contained within national protected area systems. Where ecosystem services are derived from community managed areas, the approach is sometimes used to precipitate shifts to more sustainable practices. PES is most well developed in provisioning or regulating ecosystem services including carbon sequestration, watershed services and biodiversity conservation (FAO, 2007).

The Papua New Guinea government scoped options for PES on the island of New Britain in 2015, and identified several PES 'quick wins' possible from ecotourism development, including the ecotourism lodges, hiking tours, cultural tourism and the creation of an ecotourism network (Crane, 2015).

Another emerging form of PES with particular relevance to Oceania is 'blue carbon'. With coastal ecosystems recognised as the most carbon-rich on Earth, Howard et al. (2017) identified potential for 'blue carbon' finance mechanisms to provide sustainable funding for MPAs.

BOX 7.1 NAKAU GENERATING NEW COMMUNITY REVENUES THROUGH PES

The Nakau Programme protects rainforests at sites in Fiji, Vanuatu and Solomon Islands through the creation of PES payments to communities. Land-owning communities have given up forestry and land-clearing rights in order to sell rainforest carbon offsets and conservation credits. More than 5,000 ha is now under protection in the three countries, from a combination of mechanisms including formal conservation laws, conservation leases and customary law.

The programme has been generating payments since 2016 by selling credits to overseas buyers wishing to offset their carbon emissions. Carbon offsets are derived from avoided deforestation and certified to the Plan Vivo standard. Methodology frameworks outline the benefit sharing arrangements and the project's overall governance arrangements. Beyond the value derived through the sale of credits, local communities also benefit from enhanced ecosystem services at site.

Source: Nakau website, 2019 (https://www.nakau.org)

CONSERVATION AGREEMENTS

Conservation Agreements may be formal or informal understandings between two parties, whereby economic incentives are exchanged for commitments and actions that help to achieve agreed conservation goals (Box 7.2). They may fall within the definition of payments for ecosystem services, where monetary transactions take place. The Wildlife Conservation Society (Sykes, 2018) has identified key elements to marine conservation agreements including agreement mechanisms, and parties to agreements, conservation goals, rights over natural resources, the voluntary nature of transactions, explicit incentives and conditionality. WCS has supported the development of such agreements in Fiji and Papua New Guinea, both within formal protected and traditionally conserved areas.

CONSERVATION TRUST FUNDS (CTFs)

CTFs are independent finance instruments used to manage multiple financial resources and asset types, including grants, bonds, debt-swaps or green fees. They may also *generate* funds through the use of endowments; a portion of principal maintained in perpetuity in order to generate annual returns (Box 7.3). Table 7.2 outlines a number of CTFs currently supporting management of protected areas in Oceania, and illustrates the diversity of sizes, scales and approaches among these. Inaugurated in 2017, the Asia Pacific Conservation Trust Fund Network (APNET) is a regional networking platform that links Conservation Trust Funds active in the region.

Best practice principles for CTFs have recently been summarised along with a number of case studies in preparation for the establishment of a Conservation and Climate Fund in Papua New Guinea (WCS, 2020). These principles combined with the inputs from stakeholders in consultations have concluded that the fund:

1. Be an *independent institution*, with government involvement but not government control
2. Be a Papua New Guinea *institution*, with safeguards to ensure independence
3. Combine the funding of biodiversity protection and climate action
4. Must demonstrate transparency, accountability, good governance and fiduciary responsibility as part of its design (A. Rylance, pers. comm. 2021).

BOX 7.2 EVOLUTION OF MARINE CONSERVATION AGREEMENTS IN THE NAMENA MARINE RESERVE, FIJI

Established in 1997, this 60 km^2 marine reserve to the south of Vanua Levu incorporates deep and shallow reefs, small islands and deep water ecosystems. Created by traditional tabu and with support of the dive industry in 1997, the reserve is supported by a Marine Conservation Agreement (MCA).

The MCA has evolved as a series of verbal agreements between the Reserve Manager, the Kubulau Resource Management Committee, and the dive industry, and sees individual divers contribute a voluntary fee of FJ$30 in exchange for an annual dive 'tag'. Operators place these voluntary financial contributions into a trust fund on behalf of their guests, and funds are used to support two main functions: to cover management costs of the reserve, and to fund tertiary education scholarships for local students. In recent years, sales of dive tags were above 1,500 units/year. Unpublished WCS surveys recorded fish biomass consistently higher than 1,000 kg/ha, indicative of healthy fish communities.

Source: Sykes (2018)

TABLE 7.2 Conservation Trust Funds (CTFs) in Oceania region

Trust fund	Country/region	Protected area/s	Area	Capitalisation actual (target)
Arnavon Community Marine Conservation Area Trust Fund	Solomon Islands	Arnavon Community Marine Conservation Area (ACMCA)	169 km^2	Currently ~US$1m
The Arnavon Trust is an endowment fund established around 2006, domiciled in the US with support from TNC. It supports about a third of the annual operating costs of the ACMCA, which totals US$60–80,000/year. *Source: Foale et al. (2017)*				
Fiji LMMA (FLMMA) Network Trust Fund	Fiji	Multiple LMMAs – 250 sites	10,745 km^2	Unknown
The FLMMA Network Trust Fund was created with funding from several international awards, with operational and financial support provided by Conservation International. *Source: UNDP (2012)*				
Mama Graun Conservation Trust Fund	Domiciled in Papua New Guinea. Supports conservation in Papua New Guinea, Solomon Islands, Vanuatu, Fiji, New Caledonia, Timor-Leste	Multiple sites	Unknown	US$30m
Mama Graun is mobilising funds from diverse sources to create an endowment that will provide long-term support for sustainable biodiversity resource management in the Melanesian jurisdictions of Papua New Guinea, Solomon Islands, Vanuatu, Fiji, New Caledonia, Timor-Leste. Current status is unknown. *Source: Mama Graun Trust Fund Brochure (2009)*				
Micronesia Conservation Trust	Micronesia	Multiple sites	Total 6,800 km^2	US$20m
Established in 2002, the Micronesia Conservation Trust has mobilised diverse fund sources to build an endowment of US$20 million. Funds provide long-term support for sustainable biodiversity resource management in Micronesia, and to build conservation capacity of Micronesian organisations. *Source: http://www.ourmicronesia.org/*				
Pacific Development and Conservation Trust	Multiple Oceania countries	Multiple sites	N/A	Unknown (provides annual disbursements of US$250,000)
Funded by the French government since 1989, PDCT funds projects that encourage and promote sustainable development in the Pacific and New Zealand, while conserving the natural environment and cultural heritage of its people. *Source: www.communitymatters.govt.nz/ask-us/?q=Pacific+Development+Conservation*				
Sovi Basin Trust Fund	Fiji	Sovi Basin	16,340 ha	US$3.75m (US$4.5m target)
The US$5m *Sovi Basin Endowment Trust Fund* provides finance for the sustainable management of the Sovi Basin – a forest complex that contains 97% of Fiji's terrestrial biodiversity. *Source: National Trust of Fiji (2013)*				
Tetepare (Conservation Agreement Fund)	Solomon Islands	Tetepare Island	12,000 ha	Unknown
Tetepare Island is the largest uninhabited tropical island in the southern hemisphere, and includes intact rainforest, coral reefs and mangroves ecosystems. Conservation activities are conducted by the landowners, the Tetepare Descendants Association (TDA). An endowment was created to support TDA's work with seed funding from the Australian government, supported by Conservation International's Global Conservation Fund. The fund is administered by US charity Conservation Agreement Fund. The fund is complemented by a visitor green fee (AUD$20) charged to all visitors. *Source: UNDP (2013)*				

The field of conservation finance is constantly innovating, with new players, products and approaches emerging each year. Other financing mechanisms identified by the Pacific Ocean Finance Program as having relevance to the region include: conservation offsets (such as those used in the Great Barrier Reef MPA to manage loss of coastal ecosystems), sovereign debt swaps, conservation easements, conservation impact bonds, conservation incentives, tax credits, developer fees, disaster risk insurance, Environmental Impact Assessment performance bonds, fisheries landing fees, sovereign wealth funds, tourism taxes and fees, other user fees, wetland banking and wildlife impact bonds (Walsh, 2018) – although not all may be directly relevant to protected and conserved areas.

BOX 7.3 THE SOVI BASIN TRUST FUND

The US$4.75m Sovi Basin Endowment Trust Fund provides finance for the sustainable management of the Sovi Basin, a forest complex that contains 97% of Fiji's terrestrial biodiversity. In Fiji, 87% of lands are owned by indigenous Fijians, and administered by the iTaukei Lands Trust Board (TLTB).

In the absence of specific national protected area legislation, the 16,340 ha Sovi Basin is protected by the National Trust, under a 99-year conservation lease agreement with TLTB on behalf of landowners. Annual trust fund disbursements are made to three recipients: annual lease payments to the TLTB, to the National Trust of Fiji to cover management actions outlined in a 5-year management plan, and up to US$10,000 to each village to support priorities identified in a community development plan. Communities contribute additional conservation commitments through a community conservation agreement, supported by provincial authorities. Subsequent iterations of the management plan will elevate the values of ecosystem services provided by the basin, and further develop co-management arrangements.

Source: Sovi Basin Management Plan 2013, National Trust of Fiji

Sovi Basin
(© Conservation International/photo by Haroldo Castro)

7.4 Sources of conservation funding

The sustainable financing of protected and conserved areas' core functions will inevitably require use of 'traditional' funding sources including government budget allocations, as well as the contributions of different types of donors.

Public finance may be sourced at all levels; from local government, through to national, regional and global inter-governmental agencies. Annual government budget allocations and earmarked revenues (such as user fees) will often be the most secure source, able to be used for core costs, including salaries, fuel and infrastructure. They reflect the policies of governments and demonstrate local commitment, which may be useful in leveraging external sources of funding. In its 2020 ocean finance status review, the Pacific Ocean Finance Program noted that annual contributions to marine conservation (including MPAs) from bilateral aid and multilateral agencies were US$20m and US$10m, respectively. International public environment and climate funds (including the GEF) and Green Climate Fund (GCF), international development banks and other global institutions are all significant contributors to the creation of protected and conserved areas, fisheries management, and increasingly, climate adaptation and mitigation.

Philanthropic funds are commonly used to support conservation; donors contribute funds to global charities, who may fund environmental not-for-profits to establish and manage conservation efforts in partnership with communities. Philanthropic consortia actively focused on the region include Oceans5, Global Fund for Coral Reefs and the Blue Prosperity Coalition. Ocean5 reported investments totalling US$12m for the period 2013–2019. Philanthropic contributions to ocean governance have been estimated at US$500,000/year (Walsh, 2018).

Increasingly, institutional and private capital is also playing a role in the funding of protected areas. This may range from small, local investors through to global financial institutions. Impact investment funds seek to invest where a portion of profit is forsaken in exchange for a social or environmental outcome – increasingly, this conditional form of finance is encouraging environmental and/or social improvements. With sustainable economic growth predicated on ecological sustainability, Oceania's fisheries supply chains (including small-scale fisheries within MPAs) and community-based eco-tourism may align well with this new finance class, both within and outside of protected and conserved areas. A challenge for this funding class is to ensure strong and durable performance from its investments, requiring good governance and usually third-party intermediaries focused on project development and capacity support. Protected and conserved areas can provide a suitable framework for ensuring that these governance and capacity elements are in place.

7.5 Building the economic case

Building a strong economic case, and communicating a clear, evidence-based 'value proposition' for greater investment in protected areas may help to attract financing. For example, adopting cost-benefit analyses and demonstrating return on investment could help to communicate the value of benefits derived from protected and conserved areas. Total economic value (TEV) may be used to aggregate multiple values within a system or country, and opportunity cost may highlight economic opportunities lost if protected areas are not adequately financed.

Some studies have been undertaken already. The Initiative for the Protection and Management of Coral Reefs in the Pacific (CRISP) conducted case studies in Vanuatu to examine economic impacts of community-based MPAs (or LMMAs). They applied cost-benefit analyses to evaluate the economic impact of five MPAs with specific focus on fisheries, tourism and social, human and physical capital.

Over this time, the sites demonstrated an average gross profit of around US$10,680, derived mainly from rural tourism (56% of total) and fisheries activities (26%). The mean return on investment over this time was 1.8, noting that this included development stages of both tourism and fisheries sectors. Observed fisheries benefits included increases in productivity for principal gears of between 4% to 33% increase in catch-per-unit effort. On average 70% of the benefit flows were directed to the villages, while 30% went to other national stakeholders (Pascal, 2011).

The Navakavu LMMA in Fiji was established with strong community support, and includes a no-take '*tabu' area.* The start-up investment over the first five years (2002–2007) was less than US$12,000; following start-up, the LMMA was shown to provide a TEV of US$1,700,000–1,800,000 per year (IUCN, 2019). These benefits include fisheries (45% of TEV) and coastal protection (33% of TEV) as well as waste assimilation, research and education. Analysis of finfish landings also indicates a 3% annual increase between 2002 and 2006, with an annual value of US$28,000 to the community (O'Garra, 2011).

Caution is required when communicating the economic value of environmental services and it is important to avoid misconceptions that these values may somehow be monetised. Rather, the information can be useful in engendering broad public and political support for protected and conserved areas. Such information can highlight to communities the extent to which they benefit from protected areas, and in turn, influence their decision-making around management of their resources. The information can also support the stable and adequate allocation of public funding by governments.

7.6 Sharing the benefits

Critical to the success of management and financing efforts are supporting mechanisms and strategies to ensure the equitable sharing of benefits. Increasingly, this is an important focus of financing strategies: the revised 2030 vision for the Micronesia Challenge brings stronger focus to equitable benefit sharing, and achieving gender equity.

Accountability and transparency can be supported through the governance of finance mechanisms. The Conservation Finance Alliance (CFA) sets out Practice Standards for Conservation Trust Funds (Bath et al., 2020); within these, governance standards are proposed to ensure that governing bodies are designed to adequately represent the diverse range of stakeholders. In Fiji, WCS notes a move away from the cash payments or personal benefits of the past, towards more transparent and accountable mechanisms such as community bank accounts (Sykes et al., 2018). And innovative finance mechanisms may be used to overcome bias and help to ensure equitable distribution of benefits; small grants may target particular user groups, and the creation of education funds (such as the Namena Marine Reserve scholarship programme) can help to address issues of inter-generational equity.

Namena Marine Reserve, Fiji (© Namena Marine Reserve)

7.7 The importance of strategy, planning and partnerships

An examination of 48 protected area business plans contained in the Conservation Finance Alliance database revealed that no plans were from Oceania (CFA, 2019). Similarly, the Pacific Ocean Finance Program's review of funding for large-scale marine protected areas noted that "financial plans and strategies were underutilised" in the region, and that often the strategies followed protected area inception (Conservation International et al., 2020). This is not to say that these plans do not exist in the region – (the Micronesia Conservation Trust's strategy is one notable example – see Box 7.4) – but it does indicate that this specialised field is not as well developed as in other parts of the world.

Overall, business planning should quantify the protected area's funding needs, priorities, gaps and targets. It should identify diversified sources of funding, and outline feasible strategies and timelines with which to raise these funds. It should develop roadmaps to create the mechanisms, instruments and policies needed to manage these funds. Planning should also consider the mechanisms, governance approaches and targets needed to enable transparent and equitable sharing of benefits. Mechanisms such as CTFs may be used to assist in the delivery of access and benefit sharing schemes, such as the provision of grants (such as those administered by Palau's Protected Area Network Fund) or the funding of scholarships (as occurs under the Nakau PES programme). While government budget allocations are likely to be the mainstay of many protected area financing plans, business planning can help to identify other funding and revenue sources; these may include grants from philanthropic, not-for-profit or private sectors, revenues from ecosystem services, or funds and technical assistance from bilateral and multilateral institutions. The Pacific Ocean Finance Program noted principles of prioritisation, participation, good governance, capacity and institutional fit, and technical accuracy as essential elements in successful financing strategies for large-scale marine protected areas, although such principles seem relevant to finance planning for protected and conserved areas more generally (Conservation International et al., 2020).

Given the broad array of environmental, cultural, social and economic contributions derived from protected areas (see Section 7.3), there is an opportunity to elevate the roles protected and conserved areas play in sustainable development (including responding to climate change). When aggregated at national and regional levels, this information can illustrate how and where protected and conserved areas are contributing to Sustainable Development Goals. Overseas Development Aid is a key source of funds as bilateral partners seek to assist Oceania states in meeting sustainable development targets; the European Union, Australia, New Zealand, the US and Japan are the five largest donors to the region. Overseas Development Aid is already supporting protected area management in the region. To date, the Australian government has committed AUD$13.2m to the Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security (CTI-CFF), of which effective management of MPAs is one goal. Papua New Guinea, Solomon Islands and Timor-Leste are all members of the CTI-CFF multilateral partnership.

BOX 7.4 THE MICRONESIA CHALLENGE: A REGIONAL APPROACH TO CONSERVATION FINANCE[50]

Micronesia includes the states and territories of Palau, U.S. Territory of Guam, U.S. Commonwealth of the Northern Mariana Islands, Federated States of Micronesia and the Republic of the Marshall Islands. Micronesia's half million residents are intimately connected with nature; it is estimated that its economy derives US$800 million annually from its coral reefs.

The Micronesia Challenge is a commitment made in 2006 by the five jurisdictions to conserve 30% of their nearshore marine resources and 20% of their terrestrial resources by 2020. This conservation goal is supported by a commitment to establish the finance mechanisms needed to sustain these conservation efforts moving forward. To date, the Challenge has helped to establish and support up to 190 protected and conserved areas covering 683,310 hectares. It also drives management effectiveness through the use of its own Micronesia Protected Area Management Effectiveness (MPAME) tool.

Outlined in a business plan are overall and individual jurisdictional financing plans incorporating cost estimates, existing budget commitments, potential funding sources and strategies to meet the finance gap. Estimated annual conservation operating budgets outlined in the plan include the following:

- Palau – US$3.2m
- Guam – US$8.5m
- Northern Mariana Islands – US$3.4m
- Federated States of Micronesia – US$3.8m
- Republic of the Marshall Islands – US$1.9m

A trust mechanism incorporating an endowment of US$55m was designed to produce an annuity to cover the identified gap. An 'umbrella' fund structure consists of the Micronesia Challenge Endowment Fund, under which each of the five jurisdictions has its own account. Earnings from the funds invested in the endowment go back to each respective jurisdiction to support their protected areas systems and associated activities. In 2006 the *Micronesia Conservation Trust* (MCT) was selected to serve as the financing mechanism for the *Micronesia Challenge Endowment Fund* by the Chief Executives of Micronesia.

As of 2019, the endowment had reached almost US$20m. In 2018, Palau surpassed its contribution commitment of US$9m and continues to invest to continue to grow its endowment. Palau's contributions are derived from a visitor 'Green Fee'. The Federated States of Micronesia created its account in 2012, and is now contributing US$100,000 annually in order to reach its goal of a total endowment of US$29,000,000. In 2018, Guam launched its Micronesia Challenge endowment account with a US$40,000 seed contribution from the Guam Visitors Bureau. In 2016, the Tanapag Middle School's Micronesia Challenge Club in the Commonwealth of Northern Mariana Islands donated US$1,000 towards meeting the jurisdiction's US$2m commitment to the Micronesia Challenge endowment fund.

In mid-2021, the Micronesia Challenge is expected to announce its 2030 conservation commitments. Beyond these new targets, the Challenge will take a stronger focus on the well-being and resilience of Micronesian jurisdictions; it will introduce standardised metrics for terrestrial, marine and socioeconomic outcomes, and introduce three new focus areas of operation: sustainable livelihoods, climate resiliency and sustainable fisheries management.

Among the innovations brought to bear by the Micronesia Challenge are a strong and long-term commitment to conservation, unparalleled coordination and sharing of resources across jurisdictions, a standardised PAME approach, cost modelling that incorporates valuation of ecosystem services, and innovative financing strategy incorporating diverse revenue sources and mechanisms.

[50] Sources: IUCN (2018); Jaynes (2019); and The Federated States of Micronesia (2014).

7.8 Conclusion

Oceania is an innovator in conservation finance, and its unique geography and demographics lend themselves to collaborative, regional approaches. The Micronesia Challenge has demonstrated the value in taking a regional networked approach, reducing transaction costs, bringing about consistency of approach, and fostering shared learning between jurisdictions. In the future, this innovation and collaboration should be applied to emerging financing opportunities.

In addition to financing sources and mechanisms, other factors will determine the success of financing efforts. Public support and ongoing funding will be made more likely if the suite of benefits provided by protected and conserved areas is understood, valued and communicated. Achieving equity of outcomes (e.g. the sharing of protected and conserved area benefits) must be mainstreamed in the design and governance of finance mechanisms, if they are to be broadly supported.

There must be a balance between ensuring benefits to local communities, and meeting national and global conservation obligations. Any expansion of protected and conserved area networks must be balanced with the need to ensure that existing protected and conserved areas are sufficiently resourced, and given the chance to succeed. Care must be paid to ensure that local communities are not over-burdened with the cost of sustaining those protected and conserved areas most concerned with 'global goals'.

The viability of protected area finance will be influenced by the sustainability of the ecosystems they support; for example, green fees are only viable where nature can deliver a satisfying tourism experience. This requires holistic focus across the spectrum of management effectiveness elements, including finance.

The global COVID pandemic has thrown up new challenges. The tourism revenues that usually contribute to the financing of protected and conserved areas have plummeted, exposing their vulnerability to economic shocks (Phua et al., 2021). This event has highlighted the need for flexible, diverse and cost-effective funding models if protected and conserved areas are to be resilient. Trust funds could be designed to provide 'buffering' to shocks. Greater emphasis could be placed on self-reliance by developing financing strategies at appropriate jurisdictional levels. Innovative new partnerships may be required.

The people of Oceania possess unique strengths and assets: strong regional bonds and institutions, cultural solidarity, the ability to innovate around regional approaches. Given the region's protected and conserved area ambitions, Oceania must build on these strengths in order to meet the challenge of financing its protected and conserved areas.

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Butterfly Fish among the coral reefs of Palau (© Helen Pippard)

CHAPTER 8

CONCLUSION

Goura Victoria Pigeon (*Goura victoria*), Papua New Guinea (© Marc Dozier via Getty Images)

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CHAPTER 8

Conclusion

Conserving our sea of islands: State of protected and conserved areas in Oceania report provides the first comprehensive assessment of area-based conservation in the region. The 23 countries and territories that it covers are diverse but share a common identity and geography, as well as many other features such as extensive customary ownership. Nature and culture are inseparable. Biodiversity conservation should be implemented through this lens with approaches that promote community development and well-being. Nearly a quarter of all recorded indigenous and community-based protected areas across the planet can be found in Oceania. At the same time, vast extents of offshore waters are within marine protected areas. The strong connections of people to place, as well as traditional knowledge, practice and beliefs, provide a foundation for integrating conservation with sustainable use in a unique way.

The region is notable for both its biodiversity hotspots (high diversity, high endemism) and cool spots (low diversity, high endemism). The island of New Guinea, including Papua New Guinea, is considered one of the world's five greatest high biodiversity wilderness areas, and with Solomon Islands and Timor-Leste, is part of the Coral Triangle; the world's epicentre for marine biodiversity. High levels of endemism, coupled with the small species population sizes that are a result of the small land area within the "sea of islands", makes the region's biodiversity particularly vulnerable to disturbance. Ecosystems and species across Oceania are threatened by: habitat loss and degradation; overexploitation; invasive species; pollution; loss of traditional knowledge, practice and belief systems; and human-forced climate change. Coupled with high human population growth and hence pressure on land resources, threats to biodiversity are likely to increase.

Well-designed, effective and equitable networks of protected and conserved areas are crucial for responding to these challenges and safeguarding the region's biodiversity. They can also play a role in supporting climate change adaption and the provision of food security. Indeed, there has been significant progress over the past two decades, inspired by globally recognised initiatives such as the Micronesia Challenge. The region-wide coverage of marine protected areas within EEZs is 19.9%, which is slightly higher than the global figure of 17.8%. The high percentage of marine coverage in Oceania is predominately the result of a small number of large-scale marine protected areas, which constitute 96% of the area protected. The numerous community managed areas, although small, are also significant in terms of species and habitat conservation and support for community livelihoods.

Despite this success, there remain considerable gaps that require further investment, particularly for countries with low levels of spatial coverage, areas important for biodiversity and ensuring representative protection. The region-wide terrestrial protected area coverage of 6% is well below the global figure (15.7%). Only 13% of countries and territories have achieved their commitments for coverage for terrestrial, marine or both realms. Key Biodiversity Areas are particularly important due to the levels of endemism in the region. However, only around 8% of these are fully protected and 22% are partially protected. The remaining 70% of KBAs are not included in protected and conserved areas, which is considerably higher than the global figure of 34.5%. Thirty-six terrestrial ecoregions lie partially or fully within the Oceania region. Seven of these have more than 17% of their extent within protected areas, while eight have less than 1%, while in the marine realm, 14 of the 33 marine ecoregions and pelagic provinces have 10% or more of their extent within protected areas. The full contribution of other effective area-based conservation measures (OECMs) to conservation in the region cannot be known until these measures have been identified and mapped. Data on protected and conserved

area coverage is incomplete. While 70% of countries have updated at least some of the WDPA dataset in the last five years, information remains incomplete with a quarter of the countries in the region having more point than polygon data in the WDPA.

Both customary laws and formal legislation provide the basis for establishment, recognition and management of protected and conserved areas in Oceania. The structure of these laws is varied, with some countries having an overarching protected area legislation (e.g. Vanuatu and Solomon Islands), while others have sectorial or site-based laws (e.g. *Marae Moana Act 2017, Cook Islands*). Reviews of national legislation could be useful for determining the current gaps and opportunities. Importantly, national protected area frameworks should empower customary owners and local communities to manage and conserve their resources in the face of external pressures. Governance of protected and conserved areas has received increased global attention since the World Parks Congress in Durban (2003). In Oceania, the dominant governance arrangements are community-based or shared, which are largely based on customary law and traditional management practices (37.5%). Interestingly, this number increases to 47.6% within the independent states of the region. A smaller number of government and private run protected areas complement this. Very little work has been carried out to assess governance quality in the region. Still, the prevalence of community-based arrangements could suggest higher levels of equity in decision-making compared with other regions, albeit with the potential for inequities with*in and across comm*unities. Improved coordination across these governance types is needed to meet local and national objectives for resource stewardship and conservation.

Good governance is a critical determinant of equity and hence 'quality' of protected areas. The other side of the coin and an equal determinant of protected and conserved area quality is the effectiveness of management of these places. There has been extensive work globally over the past thirty years to define general characteristics of well-managed protected and conserved areas, and then to develop and implement systems to measure how well individual areas match these standards. While accurate data on the number of assessments undertaken in Oceania is lacking, it is clear that management effectiveness studies have been less widely applied in Oceania than in many other regions of the world. Scattered assessments have been undertaken as part of GEF-funded projects, and there have been a few coordinated studies in Papua New Guinea, Palau and Micronesia. All natural World Heritage sites in the region have had management effectiveness assessed as part of a regular three-yearly global process. Based on available data across the region, just under one in five protected areas have had their management effectiveness assessed at least once, and three countries have assessed all their protected areas. Nationally adapted management effectiveness assessment tools, such as in Palau, have proved to be successful in encouraging a focus on protected area quality. It is important that these tools are easy to use and relatively efficient to implement. The IUCN Green List may offer a practical framework to benchmark performance, particularly in protected areas that are better resourced and integrated into national frameworks.

There is currently no comprehensive system for collating the results of management effectiveness assessments, and so determining a regional picture of overall effectiveness is not possible. Available results indicate that effectiveness is highly variable across the region. Establishing effective management in the absence of adequate funding, staffing and infrastructure, as is the case in a number of jurisdictions, is extremely difficult, although the widespread incidence of community management and relative isolation means that, in at least some instances, a low management effectiveness score does not indicate that the protected area does not have high remaining values. Where greater support is available from partner organisations, positive outcomes in enhanced effectiveness are evident.

Another ingredient of quality in protected area management is the capacity of staff, communities and other partners in conservation. There are many high capacity and capable protected area

practitioners within the region. However, national environment agencies often have small teams and limited time to support area-based conservation. In Oceania, with the prevalence of community managed areas, capacity development of land and sea stewards, in addition to institutional personnel, is especially important. A number of national capacity needs assessments have been conducted, most commonly through broader conservation projects. In 2016, IUCN proposed a capacity development framework and strategy for the region, built around accredited qualifications, tailored training courses and informal distance learning. Competency-based approaches provide an opportunity to professionalise protected area institutions and community stewards. Importantly, donor funded capacity-building efforts across the region and within countries could be better coordinated on occasions. This underscores the importance of national protected area committees (e.g. Samoa and Fiji) and the role of the Protected Areas Working Group of the Pacific Islands Roundtable for Nature Conservation. The Pacific Islands Protected Area Portal (PIPAP) should also be seen as an essential hub for capacity building resources and training opportunities.

The high proportion of people within Oceania living in rural communities with customary ownership of land, sea and resources means that conservation, sustainable use and well-being are all intimately connected. However, traditions are in decline in many areas, and what was sustainable in the past may no longer be sustainable today as threats to biodiversity and cultural norms change. Global influences such as the growing impacts of climate change add an additional challenge that may overwhelm communities. Protected and conserved areas can offer local communities a range of well-being benefits. Indeed, the success of the majority of protected and conserved areas in the region depends on this happening. There are numerous examples where communities have been supported to safeguard biodiversity and enhance local livelihoods through area-based conservation (e.g. YUS Conservation Area and Vueti Navakavu LMMA). Important elements for the success of these sites are reinvigorating cultural practices, benefit sharing and equitable governance arrangements. Safeguarding community rights and traditional environmental stewardship should be at the heart of a biocultural approach to land, sea and resource management that supports local conceptions of well-being.

Oceania is an innovator in conservation finance, and its unique geography and demographics lend themselves to collaborative, regional approaches. The Micronesia Challenge has demonstrated the value in taking a regional networked approach, reducing transaction costs, bringing about consistency of approach, and fostering shared learning between jurisdictions. At the national level, National Biodiversity Strategies and Action Plans typically incorporate strategies to achieve financial sustainability of protected area systems. Despite the diverse financing examples employed, significant financing gaps still exist across Oceania, undermining efforts to effectively conserve and manage nature. While it is true that protected areas around the world suffer from inadequate financing, the situation in Oceania seems particularly pronounced, with often little core funding provided by governments. The strength of the Oceania culture of stewardship may partially offset the relatively low government resourcing/capacity for conservation in many countries. Innovative and fit-for-purpose solutions are required for the wide range of protected and conserved areas; from small community-managed areas, through to large-scale protected areas.

Above all, Oceania is a trailblazer offering the conservation community lessons on how to empower indigenous peoples and local communities to manage their natural resources to achieve biodiversity and social outcomes. The region is the birthplace of the Locally-managed marine areas (LMMA) concept that has since spread to other parts of the world. Equally, the large marine protected areas make a disproportionate contribution to global conservation. Area-based conservation in the region should continue to evolve in a uniquely Oceania way. '*Conserving our sea of islands*' should be about the self-determination of island state people by focusing on the strengths and connections to place and themselves.

PROTECTED AREA LEGISLATION AND POLICIES IN OCEANIA

O le Pupu-Pu'e National Park, Samoa (© Stuart Chape)

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Protected area legislation and policies in the Oceania region

This annex describes the current status of protected areas legislation and policies in Oceania across 23 States and Territories including Timor-Leste.

American Territories

AMERICAN SAMOA

American Samoa is an unincorporated territory controlled by the United States of America. The territory's protected area legal framework is influenced by both local and United States laws. Protected areas in American Samoa can be established under four pieces of legislation:

- Parks and Recreation Code, Title 18;
- Executive Order 13158 on Marine Protected Areas under the National Marine Sanctuaries Act (16 U.S.C. 1431 et seq.);
- American Samoa Administrative Code 24 Cap. 10 (Community-based Fishery Management Program Regulations); or
- Framework for the National System of Marine Protected Areas of the United States of America.

The Parks and Recreation Code establishes the Parks and Recreation Commission, the Department of Parks and Recreation and the Territorial Boxing Commission. This chapter is concerned with the establishment of the Commission and the Department and their powers. The Commission is established within the executive branch of government. It is empowered, amongst other things, to develop policies and programmes for the administration, management and operation of the parks system and recreational activities. The Commission reports to the Legislature of American Samoa.

The Department of Parks and Recreation is created from within the executive branch of the government with the Director appointed by the Governor. It is mandated to manage, develop, control and maintain the park system and reports to the Governor and the Legislature of American Samoa on the operations of the park system and recreational programmes by the Department.

The Code establishes the American Samoa parks system. It empowers the Department of Parks and Recreation to establish protected areas and it identifies categories in which these areas should be categorised. These include Natural Preserves, Conservation Preserves, Territorial Parks or Community Parks, Territorial Recreational Facilities or Community Recreational Facilities, Historical and Pre-Historic objects and sites and Seashore reserves.

All properties that belong to the Government are to be listed in an inventory undertaken by the Government and included as part of the park system subject to the Governor's approval. It is the responsibility of the Department to determine which properties are added to the park system. For example, the Code established the Ofu Vaoto Marine Park, which is located on the island of Ofu. The purpose of the Ofu Vaoto Marine Park "is to protect its unique coral reef wildlife habitat while enabling the public to enjoy the natural beauty of the site". It is classified as a territorial natural preserve, which shall remain unimproved. This classification is in line with IUCN's protected area category II – National Park and it cannot be removed from the system or reclassified by the Governor or Director of the Department of Parks. The Code also includes seashore reserves as a category of the park system. The Code lacks an objective for the establishment of

such a reserve but provides a description of where the reserve can be created. It however specifically provides for the reserve to be administered by the Director in accordance with the park system.

The Code makes provision for funds to be set aside separately for the development and improvement of the parks system and to be managed by the Department. It makes it an offence for a person to damage any property within the Park System and specifies the punishment.

The *Executive Order 13158 on Marine Protected Areas* under the National Marine Sanctuaries Act (16 U.S.C. 1431 et seq.) is the most relevant American law for marine areas applied within American Samoa, Guam and Northern Mariana Islands. The Order defines 'MPA' as, "any area of the marine environment that has been reserved by Federal, State, territorial, tribal or local laws or regulations to provide lasting protection for part or all of the natural and cultural resources therein". It recognises areas reserved by the local governments of each Territory. The Order will "help protect the significant and cultural resources within the marine environment for the benefit of present and future generations by strengthening and expanding the Nation's system of marine protected areas (MPAs)". MPA establishment, protection and management is the responsibility of Federal agencies whose authorities provide for the establishment or management of MPAs. With regards to MPAs established at Territory level, the Executive Order requires the Department of Commerce and the Department of the Interior to consult with those States that contain portions of marine environment to promote coordination among Federal, State, Commonwealth, territorial, tribal actions to establish and manage MPAs.

The National Oceanic and Atmospheric Administration (NOAA) developed a *Framework for the National System of Marine Protected Areas of the United States of America* in accordance with the Executive Order that describes the national system and how sites are nominated. American Samoa has a total of four national sites and 11 local MPAs listed under 'The List of National System Marine Protected Areas' but does not include two national sites.

The village MPAs established at Territorial level, although listed on the national system of MPAs, are managed by the American Samoa Department of Marine & Wildlife Resources and regulated under the *American Samoa Administrative Code 24 Cap. 10 (Community-based Fishery Management Program Regulations).* The regulations reflect that the Department works closely with the people of the respective villages to co-manage these sites and the database for the List of National System Marine Protected Areas lists Community Agreements as the management plan type for all of the listed MPA sites. It may be interesting to note if these community managed marine areas may meet the definition of Locally Managed Marine Area.

GUAM

Guam is an organised and unincorporated territory of the USA, which means that the US Constitution only partially applies to Guam and that it is governed by *The Organic Act of Guam 2004* which was passed by the US Congress on Guam's recognition as a US territory. It provides Guam with a governance structure that specifies how it is to be governed, including the recognition of an agency to manage certain Federal lands. The Act does not make specific reference to protected areas. It refers to fire control, watershed protection and reforestation, consistent with existing laws, administered by the Secretary of Agriculture, which are applicable to the continental United States.

Like American Samoa and the Northern Mariana Islands, the *Executive Order 13158 on Marine Protected Areas* and *Framework for the National System of Marine Protected Areas of the United States of America* applies to Guam. The Guam National Wildlife Refuge is listed under the List of National System MPAs and is managed by the US Fish and Wildlife Service. It is the only area that is protected by the Executive Order and the Framework. A detailed explanation of how protected areas are designated is explained under American Samoa.

Guam also has the Marianas Trench Marine National Monument which is protected under Presidential Proclamation No. 8335 2009. It is managed by the National Oceanic and Atmospheric Administration through the Secretary of Commerce.

A number of National Natural Landmarks are federally designated and managed by the National Park Services, including the War in the Pacific National Historical Park. The National Park Service is established by the *National Park Service Organic Act* whose objective is to "promote and regulate the use of the Federal areas known as national parks, monuments, and reservations hereinafter specified by such means and measures as conform to the fundamental purpose of the said parks, monuments, and reservations, which purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations".

The only legislation that is relevant to the protection of areas of significant biodiversity in Guam is the *Guam Territorial Seashore Protected Act of 1974*. The main objective of the legislation is to protect the resource of the seashore reserve of Guam. The legislation establishes the Commission and its mandated authority and provides a permitting regime. It aims to implement Guam's national Seashore Reserve Plan. The goal is to protect the seashore in its natural state and also preserve and conserve the organisms that inhabit it. It addresses Guam's environmental governance by establishing the legal foundations for environmental governance on Territorial Seashore Protection.

While the Federal system for protected areas is well established, there is no indication of the linkages between Federal laws and plans and the local legislations passed through the local legislature. Guam is a territory and through its Organic Act does not have an overarching protected area legislation that makes these linkages.

THE COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS

The Commonwealth of the Northern Mariana Islands (CNMI) is a self-governing territory of the United States of America. It consists of 14 islands in the north-western Pacific Ocean including the 14 northernmost islands in the Mariana Archipelago except Guam. CNMI's Executive Branch is headed by the Governor of the Northern Mariana Islands, legislative power is vested in the Northern Mariana Islands Commonwealth Legislature, and judicial power is vested in the CNMI Supreme Court, local government is overseen through three regional mayors.

The Constitution protects the Commonwealth's natural resources under Article XIV. This includes "marine resources in waters off the coast of the Commonwealth over which the Commonwealth now or hereafter may have any jurisdiction under United States law shall be managed, controlled, protected and preserved by the legislature for the benefit of the people".[51] The Constitution also protects uninhabited islands. It places value on "places of importance to the culture, traditions and history of the people of the Northern Mariana Islands" and ensures that they are "protected and preserved and public access to these places shall be maintained as provided by law". In addition to these, "Artefacts and other things of cultural or historical significance shall be protected, preserved and maintained in the Commonwealth as provided by law".

Several key pieces of legislation cover area-based conservation. The *CNMI Public Law 18-42* establishes the protection, preservation and maintenance of public access to certain islands and submerged lands. Like American Samoa and Guam, there are US Federal laws relating to the protection of natural resources applicable in the Commonwealth of Northern Mariana Islands. This includes *Executive Order 13158 on Marine Protected Areas* and subsequently the *Framework for the National System of Marine Protected Areas of the United States of America*. However, there are no Mariana Islands sites listed under the List of National System MPAs that are managed by the US Fish and Wildlife Service.

[51] Constitution of CNMI Art XIV.i

The Marianas Trench Marine National Monument was established in 2009 by Presidential Proclamation under the authority vested by the *Antiquities Act of 1906*. Section 2 of the Act provides for the proclamation of national monuments for historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest. Such tracts of land may be "relinquished to the Government".

The *Title 85-30 Division of Fish and Wildlife* allows for the designation of marine reserves. The Director of the Division of Fish and Wildlife is empowered to designate aquatic habitats or easements in accordance with the powers of the Director outlined under Title 2 s5104 (b) (5). This section further outlines the purpose of the creation of marine reserves which is "to protect important fish and aquatic species populations and their habitats". The law then formally establishes two marine reserves on Rota and Saipan under the management of the Department:

1. Sasanhaya Fish Reserve: between and including Puña Point and the Coral Gardens;
2. Managaha Marine Conservation Area.

However, recreational and cultural use of marine reserves is allowed and encouraged to the extent that such activities are compatible with the marine conservation and management objectives of the conservation area.[52]

The *Mañagaha Marine Conservation Act* recognises Mañagaha Island and its surrounding waters to be a Marine Conservation Area. The *CNMI Public Law 12-46 Act* is to designate Bird Island and Forbidden Island as a sanctuary for the conservation of wildlife and marine life. The *CNMI Public Law 15-90* creates a marine reserve area on Tinian from Southwest Carolinas Point and to Puntan Diablo.

The *Rota Local Law No. 9-2 Act* creates a fish reserve in Rota.

Cook Islands

The Cook Islands is a self-governing country in Free Association with New Zealand. The Constitution does not specifically recognise traditional rights, although the primary function of the House of *Arikis* is to consider any matter regarding the welfare of the Cook Island people and to make recommendations which are submitted to Parliament. The House of *Arikis* has no legislative power.

The primary legislation applicable to area-based conservation is the *Conservation Act* (national parks), which has the objective of providing for the conservation of the environment and natural resources via the establishment of national parks and reserves. The Conservation Service is responsible for administering, managing and controlling national parks, reserves and coastal zones.

The Queen's Representative, on advice of the Minister, proclaims by way of a notice (published in the *Cook Islands Gazette*) that any land, lagoon, reef or island, or any Cook Islands waters, or portion of the sea-bed of those waters, shall be required for a national park or reserves. Management plans are required although there is no requirement to seek approval from the customary land/marine owners for the implementation of the management plan for a particular area. The *Ra'ui* system in Cook Islands is managed by the community. The success of this system relies heavily on the cooperation of the community at large although designation of areas around the islands as protection zones should support the *Ra'ui* system.

In 2017, the *Marae Mona Act* (MMA) created one of the largest MPAs in the world by designating its entire EEZ as a multiple use MPA. The Act provides that the Cook Islands will use its marine resources and the maritime environment while conserving biological diversity thus achieving CBD commitments. The Act has 9 guiding principles which also meet the core elements of effective nature conservation legislation; as "*the principles of ecologically sustainable use"* to guide the development and management of the Marae Moana.

[52] Above n71, s1-450.d

The principles are:

1. protection, conservation and restoration;
2. sustainable use to maximise benefits;
3. the Precautionary Principle;
4. community participation;
5. transparency and accountability;
6. integrated management;
7. investigation and research;
8. ecosystem-based management; and
9. sustainable financing.

It was enacted to protect and conserve the ecological, biodiversity and heritage values of the Cook Islands marine environment. To achieve this purpose, the MMA establishes the following institutions: (a) Marae Moana Council (Council); (b) Technical Advisory Group (TAG); (c) Marae Moana Coordination Office (Coordination Office).

The *2016–2020 Moana Policy* recognises and encourages Cook Islands traditional knowledge and practices around marine custodianship including *ra'ui* and *ra'ui mutukore*. The Act mandates that the policy is revised regularly and the Council approves all revisions. The Cook Islands are now undertaking their spatial planning processes. The success of the MPA is yet to be judged although the inclusion of deep-sea mining in its framework and the passage of enabling legislation has raised question marks around the Cook Islands' ability to manage its ocean resources sustainably.

Federated States of Micronesia

The Federated States of Micronesia (FSM) became a part of the United Nations Trust Territory between 1947 and 1978 which was administered by the United States. In 1979, FSM adopted its own Constitution and became an independent country and entered into a *Compact of Free Association* with the United States in 1986. Under the Compact, the United States provides financial assistance, protects the FSM's territorial integrity, and provides uninhibited travel for FSM citizens to the United States. In return, the FSM provides the United States with unlimited and exclusive access to its land and waterways for strategic purposes.[53]

FSM is made up of four states namely Yap, Chuuk, Pohnpei and Kosrae, and contains 607 islands stretching across almost 3 million km^2 of the Pacific. It is governed by a Constitution which expresses the sovereignty of the people of FSM. The Constitution reaffirms FSM's desire to live in peace and harmony by preserving the heritage of its past and protecting the promise of its future. It recognises and respects the diversity of its culture, the importance of the seas, and the islands sustaining the people, enlarging them and making them stronger.

The *Federated States of Micronesia Environmental Protection Act*[54] is the overarching environmental legislation in FSM. It establishes the FSM Environmental Protection Office which has the powers and duties to protect the environment. The Act makes express provision on FSM's policy to use practicable means with consideration of other national policies in ensuring that the citizens of FSM may preserve important historic, cultural and natural aspects of the Micronesian heritage. However, the Act does not go further than this to prescribe protected areas or conservation management areas.

The *Marine Resources Act*[55] promotes the conservation, management and development of the marine resources of the Federated

[53] https://www.doi.gov/oia/islands/fsm

[54] Title 25.

[55] Title 24.

States of Micronesia, to generate the maximum benefit for the nation from foreign fishing, and to promote the development of a domestic fishing industry. Chapter 5 of the Act focuses on conservation, management and sustainable use of fishery resources. The National Oceanic Resource Management Authority (Authority) is solely responsible for promoting conservation of the marine environment.

The legislation makes brief reference to closed areas where fishing is prohibited. The Authority has powers to enter into fisheries management agreements for cooperation in or coordination of fisheries management measures in all or part of the region or for the implementation of a multilateral access agreement. For the purpose of giving effect to these agreements, the Authority may implement the establishment of closed areas. The operator of a fishing vessel which is granted a permit to fish is required to report information relating to the position of, and catch on board, the vessel upon entry and departure from a closed area.

Kosrae State enacted the *Protected Areas Act of 2010*[56] under the *Kosrae State Code* and one of its objectives is to establish the Kosrae State Protected Areas System. It does not define 'protected areas' but it defines 'systems' to 'refer to the collective marine and terrestrial protected areas established by this act or designated by future statutes. The Act is applicable to "all mangroves, upland, wetland and watershed forests as delineated in Kosrae State Land Use Plan of 1994 revised in 2003 and other areas of biological significance as identified in the Kosrae Biodiversity Strategic Action Plan".[57] In declaring the establishment of the Kosrae State Protected Areas System, the Act included in it "all areas currently designated as marine park areas for the protection and conservation of fish and wildlife".[58] In addition to this, the Act provides that "all areas within the System shall remain part of the System until otherwise specified by law".

Fiji

Fiji is made up of around 300 islands, of which about 100 are inhabited. Governance consists of the President (Head of State) and the Executive, the Legislative Parliament consisting of one House, and the Judiciary. Parliament is responsible for making laws for the peace, order and good government of Fiji.

The 2013 Constitution recognises a customary system of land and the indigenous peoples' traditions and customs. About 10% of land is freehold or state-owned. The Constitution recognises the importance of safeguarding the environment. Within the civil and political and socio-economic rights contained in the *Bill of Rights*, article 40 of the Constitution specifically provides for *Environmental Rights*: "every person has the right to a clean and healthy environment, which includes the right to have the natural world protected for the benefit of present and future generations through legislative and other measures".

The *Environment Management Act 2005* establishes the Department of Environment which by section 11 is required to coordinate conservation and management of natural resources. A National Protected Areas Committee was established in 2008 to oversee Fiji's obligations under the Convention on Biological Diversity. The Committee's terms of reference include:

- to advise the National Environment Council on protected area policies and priorities;
- to support the establishment of an adequate and representative national protected area system, consistent with national and international policy commitments;
- to facilitate consensus on national priority areas for conservation, including terrestrial, freshwater and marine protected areas;
- to identify gaps in the existing protected area system, including the extent of protected areas, the state of scientific knowledge and the adequacy of existing management measures;

[56] Kosrae State Code, Title 19. *Environmental Protection and Managemen*t, Chapter 8. Terrestrial and Marine Protection Areas.

[57] S.19.803.

[58] S.19.810.

- to identify actions for the establishment and effective management of protected areas, to be implemented by government, non-government organisations and the private sector;
- to identify for to [sic] resource protected area management, and to support efforts to ensure financial resources for protected area management activities; and
- to facilitate the exchange of information and data sharing between stakeholders.

The *National Trust of Fiji Act 1970* establishes the National Trust for Fiji which is a body corporate. While the Act does not clearly stipulate categories for preservation, largely the categories under this Act correlate with the IUCN categories of protected area management. The Trust is empowered to make regulations for the management and preservation of the Trust properties. The Act establishes a National Heritage Register.

Particular terrestrial and marine protected areas are regulated by different legislation. The *Forest Act 1992* installs a Forestry Board and a Conservator. Under section 6 of the Act, the relevant Minister, upon recommendation by the Forestry Board, may declare any (i) unalienated state land, (b) land leased to the state, or (c) unalienated *iTaukei* land[59], which are already reserved for another public purpose to be a forest reserve or a nature reserve. The Minister has further powers, again upon the Board's recommendation, to cause an alienated land to be acquired for a public purpose under the *State Acquisition of Lands Act 1940* and thereafter declare the land as a forest reserve or a nature reserve. The Act places restrictions, such as on extracting timber and livestock in forest and nature reserves, and sets up provisions for licensing and fines for breaches.

The *Fisheries Act 1941*, while not having express provisions on protected areas, empowers the relevant Minister by section 9 to make regulations *inter alia*:

a. prescribing areas and seasons within which the taking of fish is prohibited or restricted, either entirely or with reference to any named species; and

b. regulating any other matter relating to the conservation, protection and maintenance of a stock of fish which may be deemed requisite.

The *Fisheries Regulations 1965* by regulation 11 prohibits killing or taking fish in certain declared areas using prohibited means. While the Act does not have specific provisions for the establishment of MPAs and LMMAs, section 13 of the Act recognises and protects customary *iTaukei* rights known as *i qoliqoli* rights. In fact, the Act sets up the iTaukei Fisheries Commission which regulates *i qoliqoli* fishing rights of *mataqalis*.

The *Offshore Fisheries Management Act 2012* by section 5 gives the Ministry of Fisheries the principal function of and authority for the conservation, management and development of the fisheries resources in fisheries waters. Section 8 allows designation of marine protected areas.

Fiji submitted its *Action Plan for Implementing the Convention on Biological Diversity's Programme of Work on Protected Areas* to the Secretariat of the Convention on Biological Diversity in 2011 ('PowPa'). Fiji submitted its *Fifth National Report to the United Nations Convention on Biological Diversity* in 2014 (which is the most recent report) and is currently working on submitting its Sixth National Report. The report elaborates the *National Biodiversity Strategy and Action Plan* which is divided into seven thematic areas, one of which is protected areas aligned to the 2020 Aichi Targets.

The report noted 23 protected terrestrial areas that met the IUCN criteria which include reserves, national parks, water catchments, sanctuaries and managed areas and account for 2.7% of Fiji's landmass.

[59] With the prior consent of the owners of the land and of the iTaukei Land Trust Board.

The current priorities for protected areas are identified as:

- Finding sustainable financing for ongoing management of current and proposed protected areas.
- Pursuing equitable sharing of benefits from conservation for resource owners and communities.
- Linking protected areas to alternative livelihood projects.

A specific target was by "2020 to achieve at least 17% of terrestrial and inland water, and 10% of coastal and marine areas of particular importance for biodiversity and ecosystem services, conservation through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective conservation-based measures, integrated into the wilder landscapes and seascapes". Currently, Fiji is working on a revised NBSAP.

In 2016, the Marine and Coastal Biodiversity Management in Pacific Island Countries Project (MACBIO) produced the *Review of Legislation, Policies, Strategies and Plans relating to the Development of Marine Protected Areas* report to the Government of Fiji. The report notes that the government during the Small Island Developing States conference in 2005 and later in 2014 committed that by 2020:

at least 30% of Fiji's inshore (*i qoliqoli*) and offshore marine areas will have come under a comprehensive, ecologically representative network of marine protected areas, which are effectively managed and financed.

Fiji's National Ocean Policy has updated the above commitment to 30% marine protected area by 2030. The report notes that Fiji does not have a law, or legislation collectively, framework or legal basis for developing a network of marine protected areas (or protected areas generally). The report recommended that the government develop a policy to guide the development of a national system of marine protected areas, including the development of new legislation and the establishment of a Marine Parks/Protected Area Authority. Currently, most marine protected areas are customary *i qoliqoli* sites managed by provincial or village units called *mataqalis*.

An updated policy and discussion paper was produced by the Fiji Environmental Law Association and EDO NSW in 2017 titled 'Towards an effective legal framework for marine protected areas in Fiji – How can MPAs be established under existing legislation and what are the possible scenarios for future regulation'. The paper notes that to create a network of MPAs in Fiji a multi-disciplinary approach is required involving consultation and agreement with communities, the Ministry of Fisheries, NGOs, fisheries experts, economists and lawyers, and other relevant stakeholders. The paper says that Fiji's MPAs largely remain informal customary *tabu* areas and are locally managed. The paper made three broad propositions:

Option 1: Making comprehensive MPA regulations – Develop a comprehensive MPA legal framework by making detailed MPA regulations using the regulation making powers under the Existing Fisheries Legislation.

Option 2: Amending Existing Primary Legislation – Develop a comprehensive MPA or protected areas legal framework by making amendments to Existing Fisheries Legislation and/or other existing Primary Legislation.

Option 3: Making New Primary Legislation – Develop a comprehensive MPA framework by making new MPA or protected areas legislation.

French Territories

The three French Territories in the Pacific have varying legal status and level of autonomy.

FRENCH POLYNESIA

French Polynesia is a territory of France and its legal status is that of an overseas country giving it more independence than any other French territory. It has an executive power that is exercised by the government with the Head of Government being the President of French Polynesia. It has a multi-party system with legislative power vested in both the government and the Assembly of French Polynesia.

French Polynesia does not have any national protected area legislation, but France, which has never adopted a specific law for protected areas, has a number of related laws that apply to French overseas regions including the French Territories of the Pacific.

The Government of France, through the Ministry of Ecology, Sustainable Development and Energy implements the National Strategy for the Creation of MPAs, with the aim to develop and expand the network of MPAs in France and its overseas territories. It fulfils France's international commitment to the CBD and the specific targets that France has set itself. The *Law of 14 April 2006* relating to national parks, marine nature parks and regional parks is the most relevant piece of legislation in terms of MPAs.

The management and conservation of MPAs in French Polynesia is assigned to a local French Polynesian governing authority.

NEW CALEDONIA

New Caledonia is a territory of France and is legally considered to be a French 'Collectivity'. The Head of State is the President of France and is represented by the Administrator-Superior. The legislative branch consists of the 20-member Territorial Assembly who are elected by popular vote and they serve a 5-year term. The Natural Park of the Coral Sea is an MPA established in 2014 covering an area of 1.3 million km^2 (501,933 square miles) and is one of the largest protected areas in the world, accommodating a third of the world's virgin reefs and ecosystems.[60] The monitoring and administration of the park is ensured by a Management Committee, which develops and proposes the management plan, advises on its implementation, its evaluation, as well as on any other subject related to the sustainable management of the park. Stakeholders included are the State, the Government of New Caledonia, customary authorities, environmental NGOs, and tourism and offshore professionals.[61]

WALLIS AND FUTUNA[62]

Wallis and Futuna is an overseas Territory of the French Republic and a member of the Overseas Country and Territory Association (OCTA). While the 'sovereign' (French) power still exercises its power via the Territorial Assembly, Wallis and Futuna's status allows for increased autonomy and for the integration of the island's local and traditionally-based institutions. Its territorial status allows Wallis and Futuna an opportunity to engage in numerous international environmental agreements, partnerships and conventions.

Responsibility for environmental management in Wallis and Futuna rests with the Territorial Service for the Environment (STE), which defines and proposes the elements necessary for the

[60] https://bigoceanmanagers.org/npcs

[61] Above n124.

[62] This section is based on the European Commission's regional ecosystem profile for overseas territories (Profil d'écosystèmes de Wallis et Futuna – Région Pacifique, Union européennes Régions Ultra-pèriphériques et Pays et Territoires d'Outre-mer – https://ec.europa.eu/environment/nature/biodiversity/best/pdf/best-profil_d-ecosysteme_wallis-futuna_2016.pdf); and the SPREP preliminary report from the Island of Wallis and Futuna. (https://www.sprep.org/att/IRC/eCOPIES/Countries/Wallis_and_Futuna/1.pdf)

development of a coherent environmental policy. Specifically, Title II of the *Wallis and Futuna Environmental Code* addresses protected areas in that it "concerns sites and spaces of interest for the preservation of biological diversity […] and more generally for any environmental, economic, social, cultural or aesthetic issue". While such legal frameworks for protected areas do exist, Wallis and Futuna is not home to any protected areas at present. Customary '*tapu'* systems are employed in two areas in the lagoon of Uvea and for the dense forests surrounding some of the water resources. Tropical storms and natural disasters, however, have severely degraded these areas. The STE has taken measures to address this, and in 2008, a study was executed to define priority conservation areas in the Uvea lagoon so that its biological resources would be protected. The study also aimed to protect 20% of the surface area of all lagoon habitats in the country. While the study helped to craft the definition of marine protected areas, it has not yet delineated them in the Territory.

Wallis and Futuna's environmental laws and policies are defined by the local authorities and are enforceable by the Head of the Territory. The Environmental Code was enacted in 2006 by the Territorial Assembly to align with and promote the sustainable development framework desired by Wallis and Futuna in its environmental policy considerations. This Code empowers communities to protect and conserve their natural resources in that some of the traditional laws and customs are formalised and integrated into the Territory's regulatory framework. However, its implementation is lacking and has not resulted in the delineation or actual protection of areas in need of conservation. This is due to a lack of administrative and technical capacity and resources required for full implementation and enforcement of enacted environmental policies. In 2015, Wallis and Futuna planned to revise and improve the Code.

Kiribati

The natural resources of Kiribati are vested in the people and the Government. The Constitution, under section 8 relating to the protection from "deprivation of property", allows laws to make provision for the taking of possession or acquisition of any property for the conservation of soil or of conservation of other natural resources.[63] The Constitution upholds the customs and traditions of Kiribati.

The key legislative act is the *Environment Act 1999* which was amended in 2007. Kiribati is currently reviewing its Environment Act. The objective of the Act is to provide for the protection, improvement and conservation of the environment of the Republic of Kiribati. The Minister of the Ministry of Environment, Lands and Agricultural Development is empowered under the Act to give directions and policy guidelines under the Act. It defines 'environment' to include "all natural and social and cultural systems and their constituent parts, including people, communities and economic, aesthetic, culture and social factors". 'Protected areas' is defined in the Act as "an area, subject to any condition if any prescribed under section 43".

The Act empowers the Minister to collaborate with relevant public authorities in assisting in the conservation and management of areas of national and international significance. The Minister is empowered to make regulations that will prescribe provisions under the Act that need to be prescribed including what is meant by national and international significance. The 2007 amendment included provisions necessary for the implementation of Kiribati's commitments under the *Convention for the Protection of the World Cultural and Natural Heritage*, the *Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter* and the *Convention on Biological Diversity*.[64] A significant addition to the Act is Division 2, which establishes a list of areas to be protected for conservation purposes.[65]

[63] Constitution of Kiribati (1995), s8.2.a.vii.A.

[64] Environment (Amendment) Bill (2006), Kiribati, Explanatory Memorandum.

[65] Ibid, s42.

Protected areas in Kiribati may be prescribed by regulation[66], and may be categorised according to international or national standards.[67] This is demonstrated by the Phoenix Islands Protected Area (PIPA) which is established by regulation and recognises the IUCN Protected Areas Categories as a management tool for the area.

Prior to prescribing an area, the Minister must undertake consultations to make reasonable enquiries to identify persons having a proprietary interest or right in the area, and if such persons are identified, attempt to make an agreement in writing with those persons relating to the protected area.[68] The agreement may provide for arrangement for the management of the protected area, activities permitted in the area and provide for compensation.[69] The Act also makes provision for revoking protected areas from being protected areas as prescribed in the regulations or having a reduced amount of protection. Such revocations must be done in accordance with a specific resolution of the *Maneaba ni Maungatabu*.[70]

The PIPA is a UNESCO World Heritage site and is regulated under the *Environment Act 1999* by the *Phoenix Islands Protected Area Regulations 2008* and the *Phoenix Islands Protected Area Management Plan 2015–2020*. The PIPA regulations are enacted by the Minister of Environment, Lands and Agricultural Development. The PIPA is categorised as a Wilderness Area in accordance with the IUCN Category 1b.

It was listed on the World Heritage List by the Government of Kiribati.

The *PIPA Conservation Trust Act* was enacted to establish the *Protected Area Conservation Trust*, to support the administration, management and operation of the Trust, and ensure that exploitation of PIPA resources remains limited or prohibited.

The *Wildlife Conservation Ordinance* provides for the conservation of wildlife in Kiribati. The Minister is empowered under the Ordinance to declare any area by notice to be a wildlife sanctuary.[71] Restrictions in a wildlife sanctuary include hunting, killing or capturing any bird or animal or searching for, taking or wilfully destroying, breaking or damaging eggs or nest of any bird or other animal except under the terms of a valid licence granted by the Minister.[72] The Minister is empowered to declare any wildlife sanctuary or area within a wildlife sanctuary to be a closed area.[73] These sanctuaries include Birnie Island, Christmas Island, Malden Island, McKean Island, Phoenix Island and Starbuck Island. Closed areas include Malden Island Wildlife Sanctuary, Starbuck Island Wildlife Sanctuary and some parts of Christmas Island.

The Ordinance empowers wildlife wardens to enforce the Ordinance[74] including the institution of legal proceedings[75] and makes provision for penalties for any obstruction committed against them while they are carrying out their powers.[76] The penalty however is as little as $10 and a one month imprisonment.

66 Ibid, s43.1.

67 Above n94, s43.2.

68 Ibid, s43.4.a-c.

69 Ibid, s43.5.b-d.

70 Ibid, s43.6.

71 Ibid, s8.1.

72 Ibid, s8.2.

73 Ibid, s8.3.

74 Ibid, s11.

75 Ibid, s13.

76 Above n106, s12.

Republic of the Marshall Islands

Marshall Islands is a constitutional republic and is officially called the Republic of the Marshall Islands (RMI). The Constitution provides for a President, a Parliament known as the *Nitijela*, the Executive (Cabinet), the Judiciary and the Council of *Iroiji* (chiefs) (the 'Council'). The Government is required in all matters of public importance to consider the traditional laws and customs of the people. The Council performs a consultative role and is concerned with matters of national importance in the context of traditional laws and customs.

The Constitution recognises traditional rights and customary laws[77] and empowers the Council to ensure that Bills affecting customary law, traditional practice, land tenure or any related matter is reconsidered. The Constitution establishes a Traditional Rights Court[78] whose jurisdiction is limited to determining questions related to titles, land rights or other legal interests in the area of customary law and traditional practices. Land that is owned today by Marshallese people remains under customary tenure.

Protected areas in RMI are regulated under the following legislation. These are:

a. National Environmental Protection Act 1984,

b. Protected Areas Network Act 2015,

c. Protected Areas Network Regulations 2020 and

d. Fisheries Act 1997.

Administration and implementation of this legislation is divided between the National Environmental Protection Authority that is responsible for the first Act, the Protected Areas Network Office that is formed under the Ministry of Resources and Development, the Marshall Islands Marine Resources Authority (MIMRA) that drafted the PAN Regulations and is the Authority under the Fisheries Act.

The *National Environmental Protection Act* establishes the National Environmental Protection Authority and empowers it to preserve and improve the quality of the environment including important historical, cultural and natural aspects of the nation's culture and heritage. Land is at the forefront of the nation's culture and heritage as it is intrinsically embedded and recognised in the Constitution. The Act allows the Authority, in exercising this function, to acquire any land or interest in land for three different purposes, one of which, is for the purposes of conservation. It further gives the Authority the responsibility to specify criteria for protection of the environment. The policy framework for the management and conservation of natural resources in RMI is also the responsibility of the Authority in consultation with the Council. Although the Authority is empowered to preserve and improve the terrestrial and marine environment of the Marshall Islands, it is not clear if the protected areas known to have been established in the country are established under this legislation.

The *Protected Areas Network Act* establishes a system for designating protected areas and a Protected Areas Network of the Marshall Islands. It is a two-step process. The Network must consist of areas that have been designated by the Ministry of Resources and Development. Designation of protected areas is done by the Ministry in consultation with the Local Resources Committee (LRC) and local government officials. Once it has been designated, the Local Resources Committee can nominate it for inclusion into the Network. All protected areas included in the Network are automatically provided assistance and support made available under the Act.

The Act clearly defines the terms 'protected' and 'protected areas' with the former focused on actions that lead to sustainability and the latter referring to areas designated through local or national processes administered by the Ministry of Resources and Development (the Ministry) as part of the Protected Areas Network. The Act recognises two types of protected area; an area that is managed for subsistence use with limited commercial use and an area that is free from any commercial use and is subject to no-take or very low level of subsistence or special occasion.

[77] Article X (1), Constitution of the Republic of Marshall Islands.

[78] Article VI, Constitution of the Republic of Marshall Islands.

The Act establishes the Protected Areas Network (PAN) Office, two committees including a Technical Advisory Committee and a Local Resources Committee (LRC) and the PAN Fund and Management. The PAN Office is established within the Ministry and assists with the implementation of the Act. The Technical Advisory Committee is responsible for the review of applications for funding from the PAN Fund and makes recommendations to the PAN Office for funding. Each protected area designated at the local community level must have a LRC. This committee is responsible for leading the formulation and approval of a management plan. The PAN Office is responsible for facilitating the preparation and development of a management plan for those protected areas that don't have a LRC. Financing the network is paramount to the effectiveness of each protected area and it is one of the support systems provided by the Act. The main purpose of the PAN Fund is to provide financial support for the administration of the PAN system and the management and planning of individual protected areas. The Act further provides the Government's intent on setting up an independent entity to act as a financial trustee for all the monies received for the PAN.

The *Protected Areas Network Regulations 2020* creates a way forward for the PAN Office to receive and disburse funds to support protected areas established by communities in RMI. Additionally, it provides a legal framework for the process of nominating areas for protection under the Act. Applications submitted for nomination of areas are reviewed by the technical committee and recommendations are submitted to the MIMRA Board for a final decision. The Regulation was made by the MIMRA under Section 522 of the Act which is a deviation from the requirements of this section of the Act which empowers the Ministry of Resources and Development to make regulations pursuant to the *Administrative Procedures Act*. The Authority was set up in 1997 and mandated to manage all marine resources in RMI. It is not clear if the Authority's powers have been extended to manage all resources other than just the marine resources.

The Regulations covers quite a broad range of areas including the criteria for eligibility of inclusion into the Protected Area Network, it expands on the types or categories of protected areas, it outlines the nomination process and specifies on the management of funds, particularly on how they are to be disbursed. There are five criteria for eligibility but the third criterion is assessed based on the creation of the protected area, its monitoring, management or enforcement measures, its associated sustainable livelihoods, capacity building and education and awareness. It requires funding assistance of up to $20,000 only for up to two years subject to renewal by the MIMRA Board. Nominations are made by way of an application form prescribed under Schedule 1 of the Regulations. Offences designed under the Regulation recognise the rules developed by LRC or relevant *Iroji* (Chief) under each respective Resource Management Plan prepared in accordance with the provisions of the Act. The Regulations do not include a process for the designation of protected areas which is enabled under the Act.

The *Fisheries Act 1997* provides a number of protections for both fish species and a fishery area. The Act makes provision for the protection of certain species, it ensures conservation and management of fish in the Fishery Waters and it designates fisheries' exclusive zones for subsistence, artisanal or sports fishing. The Act vests the exclusive management and control over the Fishery Waters in the Government, and it is responsible, through the Marshall Islands Marine Resources Authority, for establishing long-term conservation and sustainable use of the fishery resources. The Authority is empowered to declare a fishery water as a marine park or a marine reserve or a site of specific scientific or historic interest.

While the legislative framework exists for the formal declaration and preservation of protected areas, the day-to-day use of resources is usually determined by customary practices which have established measures on the use of designated areas.

Nauru

Nauru is an independent island republic and mainly consists of a raised coral island 25 miles south of the Equator. There is no official capital, however government authorities are based in Yaren. The Constitution creates a President and the Executive (Cabinet), the Legislature (Parliament) consisting of elected members, and the Judicature. Traditional and or customary laws are not specifically recognised under the Constitution although the Legislature is empowered to make laws for the peace, order and good government of Nauru including consideration of traditional practices.

Nauru does not have specific protected area legislation nor any protected areas.

Nauru submitted its PoWPA to the CBD Secretariat in 2011. The PoWPA sets the target and vision for protected areas with a goal to achieve at least 5% (>/ 105 ha) of terrestrial areas which include land and coastal areas. Additionally, the PoWPA's "long term goal is to have the main biodiversity and ecosystems protected through areas using relevant conservation planning techniques".

Rehabilitation of phosphate mining areas (constituting about 85% of the surface area of the country) presents the major challenge. The PoWPA noted that a preliminary sea to land area for protection was identified but which required further research to confirm its connections to the ecosystems from the off-shore shoal to the adjacent reefs. Nauru's NBSAP outlines a number of country projects to achieve biological conservation goals under the CBD. Under Theme 2 of the action plan, the strategic goal is: "To commit to an annual increase of 2% to enhance, develop and manage current conservation and rehabilitation of biological diversity and ecosystems to increase the percentage of Nauru's protected and conserved areas from the existing 2% of total land, including coastal areas, to 30% by 2025."

In 2019, the country submitted its Sixth National Report to the CBD. The report notes that although the NBSAP was developed in 2009 and endorsed by the government in 2013, it is yet to be formally implemented.

Niue

Niue is a small island nation which is home to less than 2,000 people. The country is fondly referred to as 'the Rock of Polynesia' as it is a single raised coral island. Niue operates in free association with New Zealand with all Niue citizens considered to be New Zealand citizens. Niue has its own constitution to make provisions for self-government. Governance comprises the Executive (the Queen and the Governor-General of New Zealand as the Queen's representative), Cabinet of Ministers of Niue, the Legislative Government (The Niue Assembly) and the Judiciary (which includes a Land and Land Appellate Court). The Niue Assembly has the powers to make laws for the peace, order and good government of Niue. New Zealand legislation does not apply to Niue unless consented to by the government of Niue. The Constitution is the supreme law of Niue. The Government of New Zealand provides necessary economic and administrative assistance; it handles Niue's external and defence affairs.

Niue has one legally designated Marine Protected Area and Specially Managed Area. The regulatory framework for protected areas both formal and informal are governed under the following legislation:

a. Environment Act 2003,
b. Domestic Fishing Act 1995, and
c. Niue Moana Mahu Marine Protected Area Regulations 2020.

The *Environment Act 2003* provides for the development of environmental laws and policies for sustainable development goals. The Environment Department is responsible for ensuring and maintaining the quality of the environment including land and marine biodiversity while ensuring sustainable development. The Department is empowered to implement programmes for nature conservation and the protection of historic areas and natural resources and to oversee the formulation of collaborative polices and scientific research or data collection in relation to the environment.

The *Domestic Fishing Act 1995* Section 7 provides for Marine Reserves and *Fono* for Fishing. With the approval of the Village Council and or the Director of the Department, marine reserves for *fono* for fishing may be declared by the Cabinet over any of the reef of Niue waters. Such declarations are made by way of public notice. No person is allowed to enter a declared marine reserve or *fono* for fishing and or take any inorganic substance, living material, or matter from the reserve. A conviction for breach can attract a fine up to $500 or 6-months imprisonment.

In line with the Environment and Fisheries Acts and Niue's commitment under the CBD and its 2011 PoWPA, Niue announced in 2017 the creation of a large-scale MPA covering about 40% of its EEZ. In 2020, the Cabinet passed the Niue *Moana Mahu Marine Protected Area Regulations 2020* under the *Maritime Zones Act 2013*. Under the Act, the Cabinet of Ministers may pass regulations and is the decision-making body for the purposes of the implementation of the Regulations.

The Regulations establish and demarcate the boundaries of the Niue *Moana Mahu* Marine Protected Area (MPA), the Beveridge Reef *Nukutulueatama* Special Management Area (SMA) with maps of the areas provided under Schedules 1 and 2 of the Regulations. It specifies prohibited and permitted activities within both the MPA and the SMA. Due to the boundary of the protected area which extends 1,000 metres above sea level and 1,000 metres below the sea, the Regulations includes activities that are automatically approved in both the MPA and the SMA. For instance, general operation or navigation of an aircraft and a vessel or ship in the MPA subject to relevant licensing assessed by the Niue Government. The same is available for the SMA including conducting compliance, monitoring, control and surveillance activities subject to assessment by the Niue Government.

Permitted activities within the MPA and SMA are regulated subject to specific conditions determined by Cabinet. Activities permitted in the MPA may include conducting a tourism operation and vessel or aircraft charter that are non-extractive and other purposes that are in line with the purpose of the MPA. Permitted activities within the SMA may be authorised and include a long list of activities. They include amongst others extractive scientific research by all methods, spearfishing, trolling, bottom anchoring, installation of moorings, anchoring of moorings, general operation or navigation of an aircraft, swimming, snorkelling and diving. Offences for prohibited activities is regulated and can cost an individual up to 2,500 penalty units or imprisonment for a term not exceeding 6 months.

Other reserves include the *Huvalu* Forest Conservation Area Project, the *Hakupu* Heritage and Cultural Park, the *Anono* Marine Reserve and other traditional village reserves (*Fono* and *Tapu*).

Palau

Palau is an archipelago of more than 700 islands covering 189 sq. miles of land and has an exclusive economic zone extending over 237,850 sq miles. The island is home to 20,000 inhabitants and a vibrant marine and terrestrial environment. With over 7,000 terrestrial and 10,000 marine species, Palau has an extensive terrestrial and marine Protected Areas Network comprising almost 80% of its Exclusive Economic Zone and has developed a successful tourism economy based on these natural assets.

Governance consists of the Executive (President and Cabinet), the *Olbiil Era Kelulau* (Parliament) consisting of the House of Delegates and the House of the Senate and the Judiciary. A Council of Chiefs comprised of traditional chiefs of each island state advises the President on matters of traditional laws and customs. One of the responsibilities of the government is to use all practicable means and resources to preserve natural aspects of the Palauan heritage and maintain an environment which supports diversity and variety. Under the Constitution, each state has exclusive ownership of all living and non-living resources provided that traditional fishing rights and practices aren't impaired. Parliament is empowered to regulate the management of natural resources. Division 1 (Title 24 – Environmental Quality), Chapter 1, Subchapter 1, section 102 of the *Palau National Code* affirms the National Government's efforts in cooperation with state governments, public and private organisations to use every practicable means and measure to create an environment where humankind

and nature can coexist in harmony. Title 24 regulates protected areas in Palau which is implemented at state level through state government initiatives and independently by traditional leaders and individuals within their own boundaries.

An amendment to Title 24 clarified the intentions of the *Protected Areas Network Act.* These included endorsing the Micronesia Challenge, financing the Protected Areas Network, and implementing the Green Fee to contribute towards the financial sustainability of the Network. A protected area refers to an existing area that has already been designated a conservation area, preserve, reserve or refuge through a state, traditional or national process. Additionally, it can be an area designated through a state, traditional or national process and recognised by the National Government to be a part of the Protected Areas Network. Protected areas can include sites of historical and cultural significance under the Historical and Cultural Preservation Act.

Title 24 establishes the Network and empowers the Minister of Resources and Development to administer and manage it in consultation with the PAN Management Committee. The Minister is responsible for designating areas under a set of uniform categories. These categories are specified under the *Protected Areas Network Regulations 2007* to be "Use Categories" and "Management Categories". The "Use Categories" reflect the traditional, local and/or national uses of a protected area in terms of permission for use, recreation and extractive uses, and educational and research permissions. These include restricted non-extractive uses, non-extractive uses, sustainable uses and other. The Management Categories correlate with the IUCN Protected Areas Management Categories. The protected areas are managed mainly for science, wilderness protection, ecosystem protection and recreation, conservation of specific natural features, conservation through managed intervention, landscape/seascape conservation and recreation and the sustainable use of natural ecosystem.

The Attorney General is empowered to prosecute criminal violations under the legislation. Maximum penalties include a fine of $10,000 or imprisonment for 5 years, or both. Civil damages may be obtained for reparation costs to protected areas. State governments are empowered to enact state and or site-specific legislation for the protected areas in their jurisdictions.

Individual states through traditional leaders and individuals by usage have independently protected areas within their boundaries and preserve the environment and the unique ecosystems, both on land and in the sea. The country is part of the Micronesia Challenge[79] "*to place at least 30% of the nearshore marine and 20% of the forest resources across Micronesia under effective conservation by 2020*".[80] The PAN Management Committee oversees the funding and the administration of PAN protected areas. A unique feature of the Network is that member protected areas do not come under the control of the National Government but continue to be managed by the original states and traditional leaders. A "Green Fee" is charged to visitors to the sites.

Palau has an updated *Revised National Biodiversity Strategy and Action Plan 2015 to 2025* which is a strategic policy to promote long-term cultural, economic and environmental sustainability through protection of biodiversity. Under the original NBSAP, Palau designated numerous protected areas to provide for conservation of ecosystems and biodiversity through the Protected Areas Network (PAN). The revised NBSAP provides for renewed consultations with stakeholders to review existing strategic plans and environment policies including the Micronesia Challenge.

Under the 2015 to 2025 NBSAP, the first strategic area to improve on conservation and sustainable use of biodiversity are "Protected/Managed Areas". The country aims to adopt national directives to target improving the protected area designation process; building monitoring and evaluation capacity; creating a national PAN management strategy; expanding land and sea area protected under PAN; enhancing PAN management capacity and coordination; increasing outreach and knowledge sharing; improving PAN financial

[79] Along with Marshall Islands, Federated States of Micronesia, Guam and Northern Mariana Islands.

[80] The Amendment to Protected Areas Network and Micronesia Challenge Act 2008.

sustainability; and coordinating PAN policies to support other conservation initiatives such as the Micronesia Challenge. A specific goal adopted is adequate funding and effective management of the Protected Areas Network by 2020. To achieve this goal, Palau committed to implementing 20% terrestrial protection and 30% for marine protection under the Micronesia Challenge.

Papua New Guinea

Papua New Guinea (PNG) is one of the largest Pacific countries occupying the eastern half of New Guinea with Port Moresby serving as its capital. Papua New Guinea is an independent state governed by the 1975 Constitution as the supreme law. Governance comprises the Head of State (the Queen of England represented by a Governor General), the Parliament, the National Executive Council, and the National Judicial System, who are empowered to enact and apply laws consistent with the National Goals. Parliament is assisted by Provincial and Local-Level Governments.

The Preamble to the Constitution recognises the traditional heritage of the peoples. The Constitution establishes national Goals, including: "Papua New Guinea's natural resources and environment to be conserved and used for the collective benefit of us all, and be replenished for the benefit of future generations." It is the duty of all Government bodies to apply and give effect to the National Goals.

PNG is one of 18 mega biodiverse countries in the world, it has 7% of the world's biodiversity on less than 1% of the world's land mass. PNG has at least 18,894 plant species, over 3,000 reef fish species, 227 reptile species, 719 birds, 271 mammals and 341 freshwater fish. It is estimated that many more species remain undiscovered and undocumented.

In 1993, PNG ratified the Convention on Biological Diversity and pledged to declare protected areas for the conservation of biological diversity and sustainable development. Two pieces of legislation look to fulfil that pledge. The *Fauna (Protection and Control) Act 1966* provides for sanctuaries to be declared to protect and regulate activities in the relevant habitats. The Act also allows for the declaration of Wildlife Management Areas and the administration of these areas. Local and or traditional owners of land must be consulted. Regulatory rules in relation to the protection, propagation, encouragement, management, control, harvesting and destruction of fauna in the sanctuaries or protected areas are regulated by appointed committees and rangers.

The earliest formal protected area was the McAdam National Park gazetted in 1970. Around the time of independence there was a push for a protected area system based upon customary ownership across both land and marine areas usually on the initiative of the customary owners and at the time this was innovative on an international scale. Unfortunately, progress has faltered. By 2005 PNG had 45 protected areas which increased to 57 covering 1.7 million hectares by 2017, that figure has not increased.

The *Conservation and Environment Protection Authority Act 2014* repealed the previous National Parks Act 1982. The Authority, formerly the Department of Environment, is now the principal regulator of the Conservation Areas Act 1978. The 1978 Act established a register of conservation areas and a number of sites have since been registered.[81] Areas for conservation can be declared if a particular area has biological, topographical, geological, historic, scientific or social importance.

The Conservation and Environment Protection Authority in 2014 published the *PNG Policy of Protected Areas*. The Policy, approved by the National Executive Council, sets the framework for all existing and future protected areas in PNG. The policy sets out the vison supported by five pillars and the guiding principle under which all decisions concerning protected areas are to be made, in order to achieve the vision. The vision is "our protected areas network across land and seas safeguard our precious and outstanding natural and cultural heritage together we manage these areas effectively for all the people of PNG".

[81] The register was not readily available at the time of writing this Chapter and PNG has struggled, by its own admission, to keep the register up to date.

The Five Pillars supporting the vision are:

1. the governance and management of protected areas. Under this pillar PNG adopts the IUCN classification for protected areas tailored to the PNG context and provides for the Free Prior and Informed Consent of all traditional and customary owners as part of the management process.
2. sustainable livelihoods for communities. Providing that as part of this commitment all traditional landowners of protected areas must be party to a conservation and benefit sharing agreement.
3. biodiversity management,
4. managing the PNG Protected Area Network, and
5. the sustainable and equitable financing for protected areas

All of the desired outcomes and objectives set out in the Pillars are subject to the guiding principles by which all decisions concerning protected areas, future and existing are guided. The guiding principles are:

1. PNG's Protected Area Network is designed and managed for and by the people of PNG
2. Ecological design and management principles and practices are to be applied
3. A fair and thoughtful system of management gives benefits to all

TABLE 1: Protected area classes for PNG

Class	IUCN category	Group
National Park (NP)	II	National
National Heritage Area (NHA)	III	National
Special Management Areas (SMA)	IV	National
Community Conservation Area (CCA)	V	Regional
Locally Managed Marine Area (LMMA)	V	Regional
Marine Sanctuary (MS)	V	National
National Park (NP	IV (with zones)	National

The Policy outlines the responsibility of each entity involved with protected areas and encompasses all existing polices, plans and legislation including the PNG Vision 2050 and PNG Development Strategy 2010–2030 along with the Conservation Act.

The Policy recommended changes to existing legislation including the *Organic Law on Local Government*. The Policy recognised that PNG had no specific legislation relating to Marine Protected Areas but stated that the policy would guide the development of such legislation. To date that legislation has not been produced.

In June 2019, PNG submitted its 6th National Report to the Convention on Biological Diversity (the Report).

The Report notes that customarily protected sites have not been accounted for in the register and recognised that many marine protected areas were '*tapu*' which means because of their traditional control systems they were dynamic and boundaries were not fixed. PNG stated that maintaining an up-to-date register of protected areas was a significant challenge.

The Report notes that, based on comprehensive evidence, progress towards targets in the NBSAP relevant to terrestrial protected areas has been at an insufficient rate. That as 92% of PNG's land and 90% of near-shore marine areas are customarily owned and or used, the critical challenge and ongoing work has been obtaining free consent and participation from these owners in identifying and administering protected areas in the country, as required by the Policy. Similarly, the commitment to benefit sharing agreements as required under the Policy had stalled and was proving difficult to implement in practice. Although the Policy provides especially for marine protected areas this too has proven very difficult to implement in practice.

A Management Effectiveness (Tracking Tool) analysis of over 57 protected areas in 2017[82] concluded that the effectiveness of the management of the protected areas was very

[82] SPREP report Assessment of Management Effectiveness for PNG's Protected Areas 2017 https://rris.biopama.org/sites/default/files/2019-09/Leverington2017%20SPREP%20Protected%20area%20management%20effectiveness%20assessment%20Papua%20New%20Guinea.pdf

limited and while the areas had been established on paper their management was patchy and problematic. The 2017 report noted that the existence and purpose of protected areas was not well understood in PNG and consequently many protected areas were poorly managed.

PNG has a sophisticated protected areas policy and comprehensive legislation but the political will or ability to push forward with the policy appears limited in light of the significant economic and societal challenges faced by the country. This is exemplified by the fact that the *Protected Areas Bill* drafted in 2016–2018 remains a Bill.

Pitcairn Islands

Pitcairn Islands is an overseas territory of the United Kingdom. It comprises the islands of Pitcairn, Henderson, Ducie and Oeno but Pitcairn is the only inhabited island. Its administrative headquarters is situated in Auckland, New Zealand. Pitcairn Islands has one of the smallest populations in the world estimated to be around fifty people only. The Constitution of Pitcairn governs the people of the country. There is no reference in the Constitution to protected areas. However, the Constitution recognises the right to a safe and healthy environment which contributes to everyone's well-being and one that is protected for the benefit of present and future generations. The Constitution enables this through laws to be passed that prevent pollution and ecological degradation and promotes conservation.

Pitcairn Islands have a specific legislation that deals with marine protected areas. The *2016 MPA Ordinance* establishes the Pitcairn Islands Marine Protected Area[83] comprising the Exclusive Economic Zone and the territorial seas of Pitcairn, Henderson, Ducie and Oeno Islands based on the following principles:

- conservation and protection of the marine environment for present and future generations;
- maintenance of biodiversity;
- minimisation of human impact;
- maintenance of the Pitcairn Islands Marine Protected Area as a global reference site against which other marine areas can be benchmarked; and
- preservation of customary fishing practices of Pitcairn residents.[84]

The Ordinance empowers the Governor of Pitcairn Islands to declare any specified area within the Pitcairn Islands Marine Protected Area to be a 'Specifically Protected Area'.[85] Such designations may only be made by the Governor if the Governor considers the order necessary for the protection of the marine environment and the order is consistent with international law.[86]

The Ordinance restricts certain activities within the Marine Protected Area including fishing, mining disturbance or removal of non-living or natural material from the seabed or subsoil, dumping of waste, causing vibrations from ships that will affect marine life and any other activity specified as a prohibited activity under the Marine Conservation Regulations and section 10 of the Regulations.[87] However, this rule does not apply for subsistence fishing by lawful residents of Pitcairn, marine scientific research and activities carried out within a Coastal Conservation Area. There are penalties for specific offences. For instance, an offence for fishing in the MPA could have a penalty of up to 12 months' maximum imprisonment or up to $50,000.

The Marine Conservation Regulations empower the Governor, who in consultation with the Island Council and the community of Pitcairn Island, may pass regulations which shall be known as the Marine Conservation Regulations.[88]

[83] Pitcairn Islands Marine Protected Area Ordinance (2016), Pitcairn Islands, s4.

[84] Above n74, s5.

[85] Ibid, s7.

[86] Ibid, s7.3.a-b.

[87] Ibid, s8.a-f.

[88] Above n74, s14.1-2.

Such Regulations have not been developed nor been passed by the Governor. Once passed, the Regulations should be applicable to all or any specified part of the Pitcairn Islands Marine Protected Area.

The *Fisheries Management Plan* empowers the Island Council, with the approval of the Governor, to adopt a Fisheries Management Plan to apply to any fishing permitted under the Ordinance.[89] The Management Plan was developed in January 2017 following the designation under the Ordinance of the Pitcairn Islands Marine Protected Areas and is only applicable to the Coastal Conservation Areas.

The *Endangered Species Protection Ordinance* is the implementing legislation for the CITES Convention which the United Kingdom extended to Pitcairn Islands. The main objective of the Ordinance is to provide for the protection of endangered, endemic and indigenous species of animals and plants and to regulate the trade in endangered species. The Ordinance does not specifically refer to protected areas, however it prescribes declaration of any land area as endemic management zone for habitat protection.[90] As of 2016, no terrestrial and marine endemic management zones have been declared.

Samoa

Samoa is an independent small island developing state (SIDS). Geographic isolation of the Samoan islands contributes to a very high species endemism of over 30%, with especially rare and endemic flora and fauna. Governance comprises the Head of State (known as the *O le Ao o le Malo*) and the Executive (Cabinet), Parliament and the Judiciary. The Legislature has the responsibility of enacting laws which protect and are consistent with the Fa'a Samoa heritage.

The Land, Surveys and Environment Act 1989 was enacted to make provision for the conservation and protection of the environment and to establish National Parks and Protected Areas. The Minister of Natural Resources and Environment is responsible for the administration of the Act. Part VIII deals with environment and conservation mainly through a Principal Environmental Officer. The Ministry can make recommendations to the Minister for the establishment and naming of national parks and nature reserves. It must submit recommendations for the administration, management and control of the parks and reserves including the protection, conservation and management of wildlife, water resources and other marine ecosystems.[91] General Management plans[92] need to be developed for the national parks, reserves, waters and water resources, coastal zones, indigenous forest and other important environmental areas. Other specific provisions relate to the protection of coastal zones, pollution of seas and inland waters and the control of litter.

The *National Parks and Reserves Act 1974* allows the Head of State on the advice of Cabinet to declare any public land a national park. Land areas less than 1,500 acres and islands are excluded from being declared as national parks. A national park has to be preserved for the benefit and enjoyment of the people of Samoa and is to be preserved as far as practical in its natural state, the animal and plant life to be conserved and the value of the park's soil, water and forest conservation areas are to be maintained. The Head of State is also empowered

89 Ibid, s15.1

90 Endangered Species Protection Ordinance (2014) Pitcairn Islands, s6.3.

91 Section 95.

92 Section 116.

upon advice of the Cabinet to declare any public land or area of sea to be a natural reserve for the protection, conservation and management of flora, fauna or aquatic life, or the habitat of these animals.[93] The declaration of aquatic reserves cannot alter or affect customary fishing rights of the *Fa'a Samoa* people of that area. Other reserves that can be declared include Recreation Reserves, Historic Reserves and other important and or biodiversity reserves. A number of reserves have been created and a summary can be found on the SPREP website.[94]

Customary management of resources is recognised in Samoa. An example of successful customary management can be found in the Samoan Safata District Customary User Rights Program. The Samoan Customary User Rights System is an area-based catch share programme that formalises the customary fishing rights of native communities. Fishing communities voluntarily establish and manage Territorial Use Rights for Fishing (TURFs) in traditional fishing areas. The programme has two aims, sustainable resource use and local empowerment. The system requires the active participation of the Samoan Government in creating and managing TURFs. In Safata District, community members have established a district-wide TURF with a network of no-take reserves to increase biological performance. Under this system the community works closely with the Fisheries Division to develop bylaws and management plans to ensure controls on fishing mortality. The management plans clarify local regulations and outline tasks and responsibilities. Communities are responsible for administering management plans and for monitoring and enforcing local fishing rules.

Samoa submitted its *Action Plan for implementing the Convention on Biological Diversity's Programme of works on Protected Areas* in 2011. The plan recognises customary ownership of land and marine areas. It targeted an increase in terrestrial protected areas to 18% and marine to 14% by 2020. In 2011 Samoa had 13 declared protected areas. The Action plan is reflected in the National Environment and Development Sector Plan 2013–2016 which has as a Key Environment Sector Objective (KESO) 1 – To implement strategies for rehabilitating, protecting and conserving priority terrestrial (upland, lowland and coastal) habitats *and species* by creating effective and representative terrestrial protected and conservation areas.

The country's *National Biodiversity Strategy and Action Plan 2015–2020* lists Samoa's biodiversity conservation vision as "Samoa's biological and genetic resources are protected, conserved and sustainably managed so that they will continue to flourish and regenerate, for present and future generations". In terms of the Aichi Targets, the country aimed by 2020 for at least 17% of terrestrial and inland water, and 10% of coastal and marine areas to be conserved through equitable management systems. At the time of the preparation of the 2015–2020 plan, only 8% of the total land area was under protection. The plan noted that not all protected areas were legally recognised, and an action point was listed to acquire legal status for at least 50% of the sites by 2020.

The 2018 Sixth National Report to the Convention on Biological Diversity notes an increase in the number of protected areas for Samoa; there are 54 terrestrial protected areas and 126 marine reserves. There are six categories of areas listed as having conservation or protected area status in Samoa:

- terrestrial reserves and national parks under government management;
- marine reserves under joint management of government and communities;
- water catchment areas;
- community conservation areas;
- fisheries reserve under community management; and
- national parks.

Samoa utilises IUCN's Protected Areas Categories System in identifying the various types of protected areas. The Ministry of Natural Resources is responsible for the majority of protected areas along

[93] Section 6 of the National Parks and Reserves Act 1974.

[94] https://www.sprep.org/attachments/VirLib/Samoa/aichi-11-country-data-dossier-protected-areas-summary.pdf

with a combination of local communities, NGOs and villages recognising the value of community and customary management methods. Notwithstanding the increased number of protected areas, the report noted that there was no legal status for some of the protected areas in both terrestrial and marine areas, and (2) limited funding from the government.

Solomon Islands

Solomon Islands is an independent state in the South Pacific. Governance consists of the Queen of England represented by a Governor General, as the island nation is a former British Protectorate. The National Parliament of Solomon Islands is responsible for enacting laws which maintain peace, order and the Melanesian cultural heritage of the people.

The *Protected Areas Act 2010* was enacted to administer the declaration and management of protected areas to conserve biological diversity and to promote related research. It establishes a system of protected "areas where special measures need to be taken to conserve biological diversity" and the management of those areas. A unique objective of the Act[95] is to promote environmentally sound and sustainable development in areas *adjacent* to protected areas with a view to furthering protection of the protected areas. The Act establishes the Protected Areas Advisory Committee which advises the government on policy matters in relation to the Act. The Committee is responsible for assisting the formulation, development, approval, implementation, monitoring and review of a National Biodiversity Strategy and Action Plan as a public–private sector approach.[96] The Committee oversees the functions of specific area management committees and has powers to enter and inspect any declared protected areas. Management committees include owners of the protected areas, public officers, provincial government officers and other required persons who live within the area. The Act[97] allows the relevant Minister after consultation to declare by order any area as a protected area of biological diversity significance if the area:

a. possesses significant genetic, cultural, geological or biological resources;
b. constitutes the habitat of species of wild fauna and flora of unique national or international importance;
c. merits protection under the Convention Concerning the Protection of World Cultural and Natural Heritage; or
d. requires special measures to be taken to conserve biological diversity.

The Director of the Environment and Conservation Division established under the *Environment Act 1998* is responsible for establishing and maintaining a Register of Protected Areas. Areas protected or declared under the relevant fisheries and forestry legislation can be recommended by the relevant Ministers to be included in the Register of Protected Areas.[98] Management Committees are required to develop, formulate, implement, monitor and review conservation, protection and management plans in respect of the specific protected area. The *Protected Areas Act 2010* also establishes the Protected Areas Trust Fund as a special Fund under section 100(2) of the Constitution. The Fund can be used for the establishment, management and other matters such as research relating to protected areas.

The *Protected Areas Regulations 2012* prescribe the categories of protected areas which include nature reserves[99], national parks[100], natural monuments[101],

[95] Section 3.

[96] At the time of writing this Chapter the strategy and action plan was not readily available.

[97] Section 10.

[98] Again, at the time of writing this chapter the Register wasn't available.

[99] Regulation 5.

[100] Regulation 6.

[101] Regulation 7.

resources management areas[102], closed areas[103] and World Heritage sites.[104] The categories correlate with the IUCN categories of protected area management categories. Schedule 1 to the Regulations provides the Management Principles of Protected Areas. Recent declarations of Protected Areas of Biological Diversity are the Siporae Tribal Forest Conservation Area (2019), Sirebe Forest Conservation Area (2019), and the Arnavon Community Marine Park (2017). A comprehensive list is available online on the *Atlas of Marine Protection*.[105]

The *Fisheries Management Act 2015* provides for the declaration of Marine Managed Areas and Marine Protected Areas. A Marine Managed Area is an area within the fisheries regulated areas and its natural state is to be preserved as far as possible to protect the marine life but allowing for the harvesting of marine resources. A marine protected area is defined in the Act as an area within the fisheries waters established for the purpose of protecting and conserving the marine environment. The relevant authorities must develop specific Fisheries Management Plans.

The Ministry of Environment, Climate Change, Disaster Management and Meteorology is responsible for administering Solomon Islands NSBAP 2016–2020. The NBSAP recognises that the country is predominantly fuelled by subsistence lifestyle with a heavy reliance on biological diversity for the peoples' livelihoods. It aimed to intensify efforts by the government to respond to challenges facing the country's biodiversity. Target 12 of Priority 11 is the most relevant with an aim to have at least 10% of the terrestrial and inland water and 15% of the costal and marine areas of the Solomon Islands protected and managed effectively. The NBSAP notes that 6% of coastal areas and 5% of terrestrial areas are protected. All land above 400 metres, water catchments and taboos are legally protected.

In the country's 2019 *Sixth National Report to the United Nations Convention on Biological Diversity*, by 2019 the country aimed to:

1. "identify existing and potential protected areas where endangered and critically endangered species are 95% confined to single sites,
2. conduct analysis to highlight those that could benefit from new or enhanced protection, and
3. develop action plans to advance their conservation."

The *Solomon Islands Plan of Action on Protected Areas* was reviewed and adopted into the 2016 to 2020 NBSAP. The NBSAP highlights that the "Integrated Forest Management in the Solomon Islands Project" from 2014 to 2018 aimed to achieve a 10% target on protected areas, identifying the need to not only invest in preservation projects but also restorative initiatives. Most protected areas, whether marine or terrestrial, are informal protected areas which still require management plans that need to consider sustainable preservation, use and restoration of these sites.

Timor-Leste

Timor-Leste is a young sovereign democratic republic having gained independence from Indonesia in 2002 after decades of conflict. It has a population of about 1.3 million people. With limited resources, the administration of laws, especially in relation to protected areas, is in the introductory stages. The governance of the country is divided between the President and the Council of States, the National Parliament and Government, and the Judiciary. One of the fundamental objectives of the government at section 6 of the Constitution is to "*protect the environment and to preserve natural resources*" and "*to assert and value the personality and the cultural heritage of the East Timorese people*". Accordingly, section 54 of the Constitution only allows national citizens to have the right to ownership of land. By section 59, everyone has the right to cultural enjoyment and creativity and the duty to preserve, protect and value cultural heritage. Environmental right is recognised under Section 61 of the Constitution. While the Constitution gives each citizen this right, it also makes each responsible for protecting it and improving it for the benefit of future generations. This section further requires the state to

[102] Regulation 8.

[103] Regulation 9.

[104] Regulation 10.

[105] http://www.mpatlas.org/region/country/SLB/

preserve natural resources and promote actions that are geared towards protecting the environment and more so safeguarding the sustainable development of the economy.

Timor-Leste's protected areas are regulated under the *National System of Protected Areas Decree No. 5/2016* which was enacted to further the government's efforts towards the protection of the nation's natural resources and biodiversity and also to meeting their obligations under the CBD. The objective of the Decree is to establish the legal framework in the creation and management of the National System of Protected Areas.[106] The National System of Protected Areas aims to integrate both the terrestrial and maritime protected areas into the legal framework.[107] The Decree also recognises the need to take into account traditional practices and customs such as the *lisuk*, *fatin lulik*, *Lisan* and the *tara bandu* when establishing protected areas through proper consultations with local chiefs and communities.[108] The Decree authorises the member of government responsible for protected areas to classify proposed areas into one of the following categories: National Park[109], Wildlife Sanctuary[110], National Monument[111], Protected Landscape[112] and Natural Reserve.[113] The Decree defines each of these categories. A schedule of a total of 46 protected areas established under the Decree can be found under Annex 1 of the Decree.

The Decree on the *Procedures for Submission of a Proposal for the Creation of a Protected Area Decree No. 14/2017* establishes the procedures that apply for the submission of a proposal for creation of a protected area. It provides the guidelines that must be met in the proposal process which includes guidance on publication, articulation of the proposal, public consultations and the proposal itself.

Tokelau

Tokelau is a non-self-governing territory of New Zealand. The Head of State is Queen Elizabeth II and it is formally represented by the Governor General of New Zealand and the Administrator who is a New Zealand Government official. The Constitution of Tokelau is the supreme law of Tokelau[114] and it lays out the powers of the Government (General Fono), the law-making procedure, the jurisdiction and structure of court systems, and rights of the people of Tokelau. The General Fono consists of the *Faipule*, and *Pulenuku* of each village along with one delegate from each village for every 100 inhabitants of that village.[115] The laws of Tokelau are made by the General Fono.

All land on Tokelau is under the control of the *Taupulega*.[116] There are only two types of lands; customary land and special land which is land that is not customary land.[117] The Constitution does not allow the transfer or interest in land in Tokelau to a non-Tokelauan.[118] Customary land is passed through families from one generation to another.[119] If land is required for a national purpose then there must be agreement between the Government of Tokelau and the village in respect of that land.[120]

Tokelau does not have protected area legislation nor does it have an overarching environmental legal framework. However, it has three government designated protected areas namely, Fakaofo Conservation Area, Atafu Marine Conservation Area and Nukunonu Marine Conservation Area.

[106] Decree No. 5/2016, National System of Protected Areas, article 1.

[107] Ibid, Article 8.

[108] Ibid, Article 6.

[109] Ibid, article 18.

[110] Ibid, article 19.

[111] Ibid, article 20.

[112] Ibid, article 21.

[113] Ibid, article 22.

[114] Constitution of Tokelau, (1949) Tokelau, Art 15.

[115] Ibid, Art 3.

[116] Ibid, Art 15.1.

[117] Ibid, Art 15.2-3.

[118] Ibid, Art 15.5.

[119] Tokelau Islands Amendment Act (1967).

[120] Ibid, Art 15.6.

Tonga

Tonga, officially the Kingdom of Tonga, is one of the world's smallest constitutional monarchies. His Majesty King Tupou VI was formally crowned in 2015. The Government consists of the King, the Privy Council and Cabinet, the Legislative Assembly, and the Judiciary. The King is the Head of State and the Sovereign of all the Chiefs and the people. The King governs through Ministers. The Legislative Assembly is responsible for passing laws.

Tonga's protected areas legislation is limited to the one Act that has existed since 1977, that is, the *Parks and Reserves Act 1977*. It was enacted a decade before the CBD came into force in 1993. While it provides for the establishment, preservation and administration of parks and reserves through a Parks and Reserves Authority, its objectives are not centred in biodiversity or environmental conservation. The rationale for declaring parks and reserves is quite broad and can include fulfilling Tonga's commitments to the CBD in terms of the Aichi Targets for terrestrial and marine protected areas. The legislation deals with land and sea parks and reserves. The Authority with the consent of the King's Privy Council can declare any area of land or sea to be a park or reserve (or cease to be such). All parks and reserves need to be registered under the *Land Act*. While there are no specific categories of parks and reserves, an area may be declared as such if it has natural, historic, scientific or other valuable features, and:

- a park has to be administered by the Authority for the benefit and enjoyment of the people of the Kingdom and the people are free to enter for recreation.
- a reserve has to be administered by the Authority for the protection, preservation and maintenance of any valuable feature of the reserve, and the accessibility to the reserve is governed by the specific conditions stipulated by the Authority.
- a marine reserve is administered for the protection, preservation and control of aquatic life and any organic or inorganic matter under the sea.

In 2015, the Government of Tonga, decided to implement the Pacific's first marine spatial plan with the overall goal of achieving ecological, sustainable, social and economic development of Tonga's ocean space for the benefit of the people of Tonga.[121] Tonga is in the process of drafting an oceans bill that will implement this vision. In 1979 the Authority declared the following parks and reserves under section 4 of the Act:

a. Hakaumama'o Reef Reserve

b. Pangaimotu Reef Reserve

c. Monuafe Island Park and Reef Reserve

d. Ha'atafu Beach Reserve; and

e. Malinoa Island Park and Reef Reserve.

The *Forests Act Chapter 126* allows the King in Council to declare any unalienated land as a forest reserve or reserved area. Mainly a Forest Reserve is then preserved in its natural state and felling activities are prohibited. Under the *Birds and Fish Preservation Act Chapter 125*, a "Protected Area" is defined under section 2 as "any area comprising land, or water, or land and water". The Act declared as a Protected Area, "[a]ll and Whole the lagoon in Tangatapu known as Fanga'uta and Fanga Kakau, being the area lying to the South of a straight line drawn from Niutao to the Northmost point of Nukunuku Motu and including the Straits known as Holeva and all mangrove and foreshore".

The Prime Minister with the consent of the King's Privy Council has the powers to add to the list of protected areas under this Act. The *Seabed Minerals Act 2014* is a recent legislation which is directly linked with Tonga's obligations under the CBD (which Tonga acceded to in 1998). The Act establishes the Tonga Seabed Minerals Authority, and sets the framework for seabed mineral exploration, research and declaration of protected areas. A "Protected Area" under the Act is any area within the country established as a protected area within the meaning of the CBD. Seabed titles are subject to the *Matabule* custom ownership system. The Authority is responsible *inter alia* for protecting and preserving the marine

[121] https://www.oceans5.org/project/transforming-tongas-ocean-management/

environment and to develop policies to that effect. Seabed mining or other activities or licences for such activities are prohibited in areas declared to be Marine Reserves.

In 2019, Tonga embarked on working towards transforming its oceans management and governance by drafting the *Oceans Planning and Management Bill 2019.* The Bill is still a draft at the time of this report. Tonga's National Biodiversity Strategy and Action Plan 2006 identified one of its goals to include the review and enactment of legislation to give effect to Tonga's obligations under multilateral environmental agreements.

Tuvalu

Tuvalu, formerly a British protectorate as part of the Gilbert and Ellice Islands, is one of the smallest sovereign democratic countries in the world in terms of land mass consisting of mainly archipelagic coral atolls and a few islands.

Governance consists of the Sovereign (the Queen of England) through a Governor-General, the Executive and Cabinet, the Parliament, and the judicial system. The Parliament is empowered to make laws for the good governance of the country considering the traditional Polynesian heritage of the people. The Bill of Rights under the Constitution provides basic civil and political rights.

The *Conservation Areas Act 1999* makes provisions for the declaration and management of "conservation areas", defined to include marine areas and terrestrial areas. The Minister is empowered[122] to declare any part of Tuvalu as a Conservation Area after receiving a report (including a scientific report) from the *Kaupule*.

The *Kaupule* is an area specific arm of the executive "island council". The objectives of establishing conservation areas is centred around the need to protect, conserve and preserve the environment and biological diversity of Tuvalu while at the same time promoting it for the public's enjoyment and for scientific research.[123]

Management of conservation areas is vested in the *Kaupule*. The management plans must consider the present state of the conservation area and the long-term objectives including procedures and prohibitions within the area. The Act also requires the *Kaupule* to establish a special fund known as the Conservation Area Fund to be used for the management of the conservation area. In 1999 the *Funafuti Conservation Area Order* was declared.

Other conservation areas have since been declared but a comprehensive list is unavailable, given that some sites are customarily administered. The *Marine Resources Act 2006* provides for the promotion, regulation and the long-term conservation of living marine resources. One of the objectives of the Act under section 3 is to "*conserve marine ecosystems, including protecting biodiversity in the marine environment*". Exclusive management and control of fisheries resources are vested in the government. The relevant Minister is required to take conservation and management measures on the *precautionary approach* which includes declaring any specified area as a "Protected Area" as a:

i. marine park

ii. marine reserve

iii. site of special scientific or historic interest.

Protected areas in Tuvalu remain largely informal and managed by *Kaupules* (traditional island councils).

[122] Section 3.

[123] Section 4.

Vanuatu

Vanuatu, formally the New Hebrides, gained independence in 1980. The country is made up of a string of more than 80 volcanic islands.

Governance consists of the President (Head of State) and the Executive; the Legislature known as the Parliament; the National Council of Chiefs and the Judiciary. Parliament is responsible for making laws for the peace, order and good government of Vanuatu. The National Council of Chiefs is composed of custom chiefs elected by their peers sitting in District Councils of Chiefs. The functions of the Council include discussing all matters relating to custom and traditions in the country and making recommendations for the preservation and promotion of *Ni-Vanuatu* culture and languages. Article 52 of the Constitution requires Parliament to establish village and or island courts to deal with customary matters through chiefs.

The Preamble to the 1980 Constitution recognises the ethnic, linguistic and cultural diversity of the people. Chapter 2 contains the fundamental rights and duties of the people. One of the fundamental duties of citizens is "to protect the Republic of Vanuatu and to safeguard the national wealth, resources and environment in the interests of the present generation and of future generations". The Constitution vests all land in the indigenous custom owners and their descendants. The rules of custom form the basis of ownership and use.

The *Environmental Management and Conservation Act 2003* is an overarching environmental legislation that provides for the conservation, sustainable development and management of Vanuatu's environment. Part 4 of the Act deals with biodiversity and protected areas and establishes the Biodiversity Advisory Council. Any development activity that may affect a protected or proposed protected area must submit a robust environmental impact assessment for approval. The Council works through scientific, cultural and technical/legal aspects on paper and on the ground in assisting the government to implement the CBD.

This Act is an example of the possibility of customary owned land being administered and managed as a protected area under statute law. However, the catch in this Act is that the customary landowners must play a vital role in its management. The Act empowers the Director of the Department to negotiate with customary landowners for the protection and registration of any customary owned site as a Community Conservation Area. The Director may consult and provide assistance to the landowners upon them agreeing to establish a Community Conservation Area. Upon registration as a Community Conservation Area, the landowners and management committees are responsible for the development and implementation of conservation, protection and management plans with financial and or technical assistance from the department responsible for the environment.

Vanuatu's national parks and natural reserves are regulated under the *National Parks Act 1993* which provides for the declaration of parks and natural reserves and mechanisms to protect these declared areas. There are only two categories; national park or natural reserve and each category is not clearly defined in the Act. However, the Act lists a number of characteristics worthy to be preserved in their natural state either as a national park or natural reserve. These characteristics can be found in section 2 (1) of the Act. The Act establishes a National Parks Board who, amongst other responsibilities, makes recommendations to the Minister to declare areas as a national park or natural reserve.

Upon declaration of a national park and/or reserve, the Board must prepare a management plan for the park or reserve. The management plan must be made in consultation with customary owners of the area. It has to be reviewed and/or renewed every two years. A Conservation Fund is established for the administration purposes of the Board.

The *Land Reform (Amendment) Act 2013* allows the relevant Minister to declare any state land a "Public Park" and to declare any state land a World Heritage site. World Heritage sites remain with customary owners who are responsible for managing the area with the rules of custom. The relevant Minister is empowered to declare the following categories of "Public Reserves":

a. a nature reserve
b. a special purpose reserve
c. an urban open space
d. a designated community space
e. a cemetery or burial ground.

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