

Pacific Coral Reef Action Plan

2021–2030



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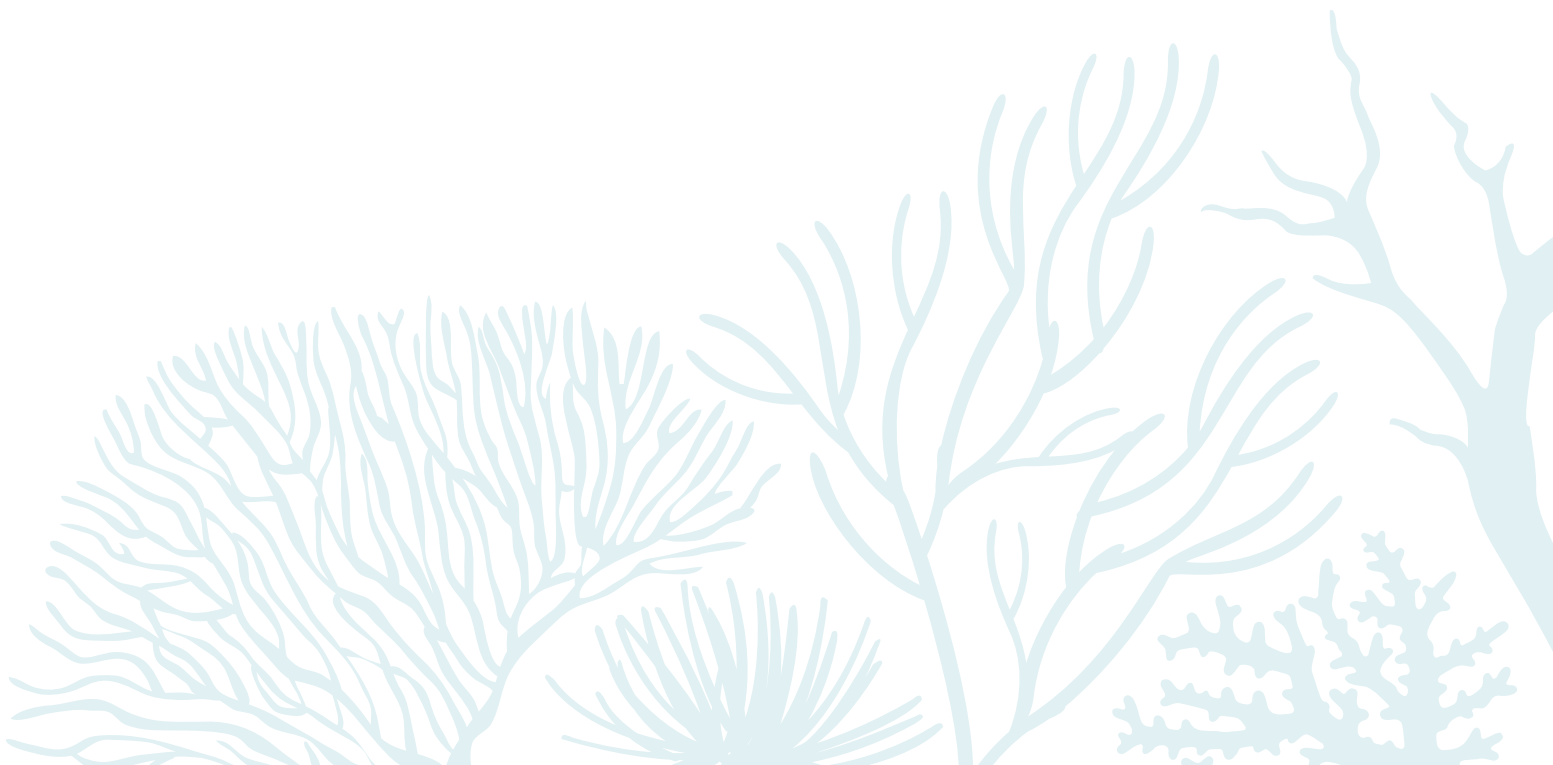
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SPREP's vision: The Pacific environment, sustaining our
livelihoods and natural heritage in harmony with our cultures.

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Pacific Coral Reef Action Plan

2021–2030







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Foreword

Kosi Latu, Director General of SPREP



The importance of coral reefs to the future of people in the Pacific cannot be understated. Our coral reefs provide ecosystem services¹ that touch on every aspect of our lives. Coral reefs are the foundation of our atoll nations and protect all of us from the sea. They provide our coastal communities with food and livelihoods; they contribute millions of dollars to national revenue through tourism.

Sadly, Coral reefs are under threat, like never before. The IPCC Special report on the Oceans and Cryosphere paints a grim picture. Climate change is causing the sea to warm. Marine heatwaves have doubled in frequency, become longer and more intense, causing repeated coral bleaching events. Greater intensity of cyclones is also causing more frequent damage to reefs. The period between these events is making recovery very difficult. As the ocean absorbs more CO₂, ocean acidification is now adding more pressure for recovering corals. It is forecast that global warming over 1.5 degrees will cause loss of up to 70% of the world's corals and at 2 degrees warming the loss of 99% of corals is likely.

The threat to the Pacific region, from warming seas and rising sea levels, is existential. The Pacific region's leaders have unfalteringly advocated for reduced greenhouse gas emissions to minimise temperature increases.

To save coral reefs, action must be taken on climate change. But, as small island states, we must act to improve the health and resilience of our reefs. We can reduce threats that reefs face from overfishing, land-based pollution and destructive development. The Pacific region is home to 25 per cent of the world's coral reefs, so we should not underestimate the magnitude of this task. It needs a concerted and coordinated approach from all sectors of society, applying scientific knowledge and assistance from the global community. Using local traditional knowledge and custodianship will also be vital.

The *Pacific coral reef action plan 2021–2030* has been developed with SPREP Members and coral-reef scientists and conservationists globally. The Plan outlines regional actions that will support national governments and local communities to care for their coral reefs. SPREP is committed to implementing this plan with our Members, and other agencies and non-state actors. The Plan provides a reference point to coordinate our conservation of coral reefs across the region, a platform for cooperation, and a way to monitor our progress in this crucial endeavour.

SPREP Members endorsed the Plan at the 30th SPREP Meeting, 2021.

¹ The benefits people obtain from ecosystems.

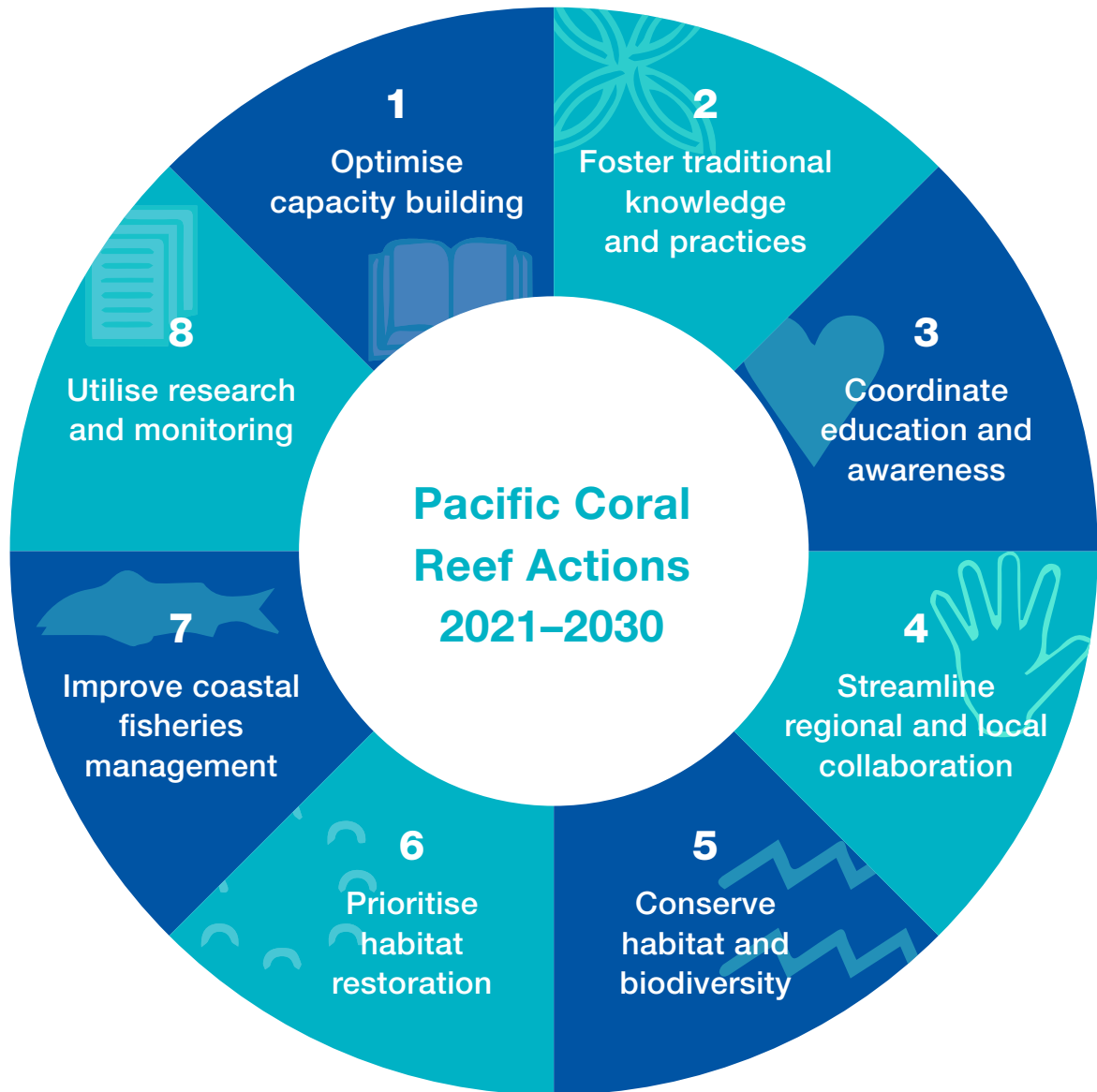


FIGURE 1.1. Action areas for Pacific coral reefs from 2020 to 2030

Executive Summary

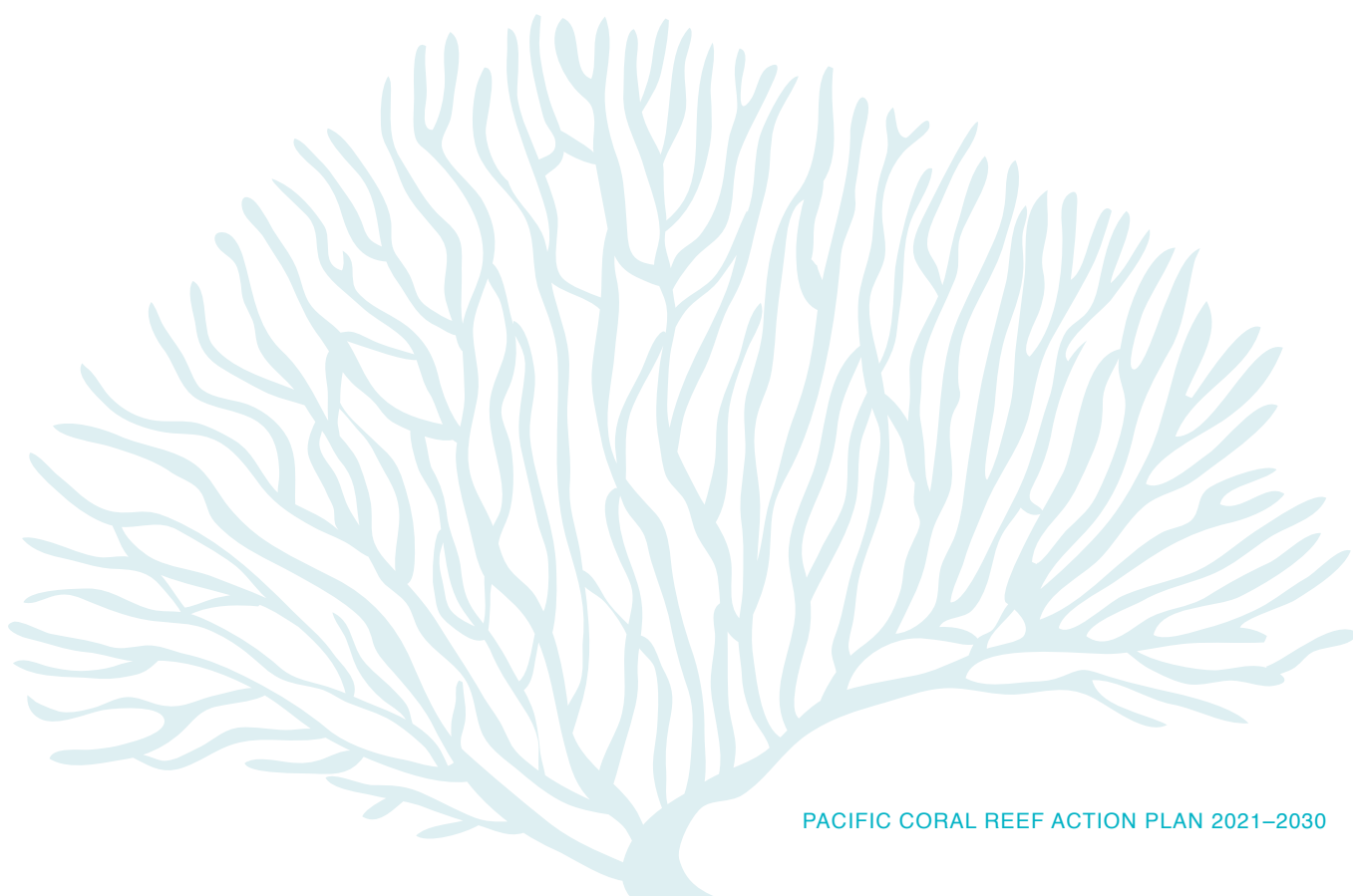
Many Pacific coral reefs are being damaged by habitat disturbance, pollution, fishing and climate change (Moritz et al. 2018); climate change is believed to be the greatest human-induced threat to corals in the Pacific region.

The region needs an action plan to make cohesive decisions that will benefit coral reefs. This will enable leaders of Pacific Island countries, coral-reef managers and community members to coordinate their efforts to protect these valuable ecosystems. Regional cooperation can optimise synergies between programmes and actions to achieve better outcomes, by sharing knowledge and using economies of scale. A regional plan can also provide the basis for securing the funds needed to protect and manage coral reefs. The *Pacific coral reef action plan 2021–2030* intends to focus the region's coral-reef conservation and management on four priorities over the next ten years:

- 1 conservation of habitats and biodiversity
- 2 sustainable fisheries and food security
- 3 resilience and adaptation to climate change
- 4 sustainable tourism.

To address these priorities, the Plan recommends eight action areas (see Figure 1.1), which each have outcome-based indicators to evaluate progress in the short and long term.

The human-induced threats to coral reefs are increasing, so efforts to conserve coral reefs will need to continue well beyond 2030. Efforts will need to adapt to emerging ecosystem priorities and may need to be further strengthened. This plan should be updated, if necessary, and, before it ends, a new plan for 2030 and beyond should be initiated.



Abbreviations and Acronyms

ACP	Organisation of African, Caribbean and Pacific States
BIOPAMA	Biodiversity and Protected Areas Management Programme
CBD	Convention on Biological Diversity
CORAL	Coral Reef Alliance
COTS	Crown-of-thorns seastar (<i>Acanthaster planci</i>)
CRISP	Coral Reef Initiative for the South Pacific
CROP	Council of Regional Organisations in the Pacific
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CTI-CFF	Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security
EIA	Environmental impact assessment
EPSCoR	Established Program to Stimulate Competitive Research
EU	European Union
FSM	Federated States of Micronesia
GBF	Post-2020 Global Biodiversity Framework
GEF	Global Environment Facility
GCRMN	Global Coral Reef Monitoring Network
ICRI	International Coral Reef Initiative
IFRECOR	French Coral Reef Initiative
IOC	Intergovernmental Oceanographic Commission (UNESCO)
IPCC	Intergovernmental Panel on Climate Change
IUCN	International Union for Conservation of Nature
LMMA	Locally managed marine areas
MER	Monitoring, evaluation and reporting
MPA	Marine protected area
NGO	Non-governmental organisation
NMI	Northern Mariana Islands
NZPPOA	New Zealand–Pacific Partnership on Ocean Acidification
PCCC	Pacific Climate Change Centre
PCCOS	Pacific Community Centre for Ocean Sciences
PEUMP	Pacific European Union Marine Partnership Programme
PNG	Papua New Guinea
R2R	Ridge to Reef Programme
SDG	Sustainable Development Goal
SOEC	State of Environment and Conservation
SPC	Secretariat of the Pacific Community
SPREP	Secretariat of the Pacific Regional Environment Programme
UN	United Nations
US	United States of America
WWF	World Wildlife Fund

Pacific Coral Reef Action Plan 2021–2030

VISION

“By 2030, the resilience and health of reef ecosystems in the Pacific islands are improved.”



1 Introduction

Coral reefs occur throughout the Pacific islands. There are no other places in the world where coral reefs are so prevalent and have flourished and evolved, as they have in parts of the Pacific. The Pacific region is home to approximately 25 per cent of the world's corals. The reefs are ecologically and socially important for the islands and their people, biodiversity and economies. They nourish and stabilise shorelines, provide income through tourism and fishing, are a vital source of protein for many people, and are part of cultural identity. The region's coral reefs not only benefit the Pacific but also the world, in terms of their contribution to biodiversity, habitat and the fishing industry.

Climate change, ocean acidification and waste pollution are having an impact on the world's coral reefs, and large-scale responses to the anthropogenic threats are urgently needed. To prevent Pacific coral reefs degrading further, substantial effort is needed. In recent years, Pacific Island countries and territories have implemented various national and sub-national coral-reef conservation projects in areas like protected areas, monitoring, research and restoration. Many have been successful, and all are contributing to making reef communities more resilient.

There have also been a number of regional initiatives; however, across the region or sub-regions, these have typically not demonstrated strong collaboration or knowledge sharing, and have lacked consistency. Regional studies show that more action, beyond local management, is needed. Regional action plans that drive collaboration, exchange and partnerships are therefore vital to help secure the future of the region's reefs and the livelihoods of its people. This provides an opportunity to integrate existing efforts and maximise the achievement of regional objectives. When the region works together it can optimise synergies between conservation programmes to achieve better outcomes, by sharing knowledge, mobilising resources and exploiting economies of scale.

The region needs an action plan to make cohesive decisions that will benefit coral reefs. This will enable leaders of Pacific Island countries, coral-reef managers and community members to coordinate their efforts to protect these valuable ecosystems. The *Pacific coral reef action plan 2021–2030* intends to focus the region's coral-reef conservation and management over the next ten years.



1.1 Action Plan Formulation

The Plan was developed with SPREP Member representatives. They contributed their main objectives for managing coral reefs; and information about the dominant stressors to reefs, their existing and potential reef-management initiatives, and the key risks threatening the success of these initiatives. These responses, and some secondary consultation which were carried out for clarification purposes, led to the actions proposed in this plan. Advice and feedback was also sought, on an earlier version of this plan, from Members, experts and other stakeholders. These included multilateral organisations in the Pacific region (such as Council of Regional Organisations in the Pacific, or CROP, agencies), and experts in coral-reef management (such as International Coral Reef Initiative, NGOs, universities and research institutions, Commonwealth Scientific and Industrial Research Organisation and Great Barrier Reef Marine Park Authority).

The Plan recommends eight action areas, each containing a list of tasks (see Section 4). Each task is assigned as high, medium or low priority based on a combination of:

- how frequently the task was mentioned, and the importance given to it, by stakeholders;
- whether implementing the task will directly address a key threat or barrier to effectively managing or conserving coral reefs;
- how achievable the task is during the Plan's timeframe, how likely it is to be successful, and how likely it is to secure finance to implement it; and
- how urgent the task is or whether other high-priority tasks depend on the task to be completed first.

As this is a regional plan, this prioritisation is indicative—actual priorities will vary geographically (for example, by country or island). When countries and territories develop national plans and set priorities, they will need to reassess the task priorities in the context of their local situations.

1.2 Purpose and Guidance

The Plan has been developed for SPREP and its Pacific Island Members² to use to combine their efforts to successfully manage tropical and sub-tropical reefs in the region. We anticipate that national governments, and their partners where they choose to, will lead on implementing the Plan, while CROP agencies will help with capacity building and securing resources.

This regional approach recognises that coral reefs across the Pacific Ocean are inherently connected, while being sufficiently flexible to accommodate nations and territories having different national priorities. For example, reefs can be affected by natural and human-induced influences that occur outside national jurisdictions. These influences include dispersal of biological matter, oceanographic processes (such as temperature and currents), large-scale pollution and marine heatwaves. However, in many instances, there will also be local priorities such as coastal development and coastal fisheries, which will vary between parts of the region and between countries, and within countries. Therefore, the Plan will mostly be implemented at the national level to address national priorities.

² SPREP's Pacific Island Members are American Samoa, Cook Islands, Fiji, French Polynesia, Guam, Kiribati, Marshall Islands, Nauru, New Caledonia, Niue, Northern Mariana Islands, Palau, Papua New Guinea, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu, Wallis and Futuna.

SPREP will work with individual countries and territories to:

- develop implementation plans and priority projects that align with the *Plan* but target local priorities;
- develop monitoring, evaluation and reporting frameworks tailored to their implementation plans; and
- help identify and secure resources and financing.

The Plan sets out actions that can be:

- reasonably achieved during the ten-year timeframe;
- implemented by countries and territories (this does not exclude relevant organisations, which operate in the Pacific region, contributing to, or otherwise supporting, the actions); and
- supported by regional organisations at a regional scale.

There are some threats to coral reefs that Pacific Island countries and territories cannot reasonably be expected to address within ten years, and which may not be within the region's capacity to resolve (for example, global matters like climate change). Still, the Plan includes small steps towards addressing such threats and, when they are successfully implemented, must be celebrated for positively contributing to making reefs more resilient to major threats.

Pacific Island leaders are clear that climate change is one of the greatest threats to the region. They are calling on the world to be more ambitious in reducing emissions, assisting vulnerable countries to adapt and become more resilient, and financing capacity building and technology transfer. While leaders recognise the role that ecosystem-based approaches can add to mitigation of climate change impacts, they are cognisant that ecosystems themselves are vulnerable to the impacts of climate change. In addition to leading the world for action to reduce carbon emissions, the Region must also implement local actions to build resilience of coral reefs and associated ecosystems.

The Plan allows for short-term and long-term progress to be evaluated, so that:

- 1 emerging implementation issues can be addressed;
- 2 lessons can be learned and shared; and
- 3 plans for post-2030 can be made in good time and be informed by the current plan.

Gender equality and social inclusion should be considered at every stage of engaging with others about, and implementing, the Plan. Organisations responsible for implementing projects and tasks initiated under this Plan are encouraged to seek examples of appropriate and successful gender inclusion and empowerment in marine conservation and management. The principles of gender equity and social inclusion should be considered during design phase of projects.

1.3 Goals for Pacific Coral Reefs (2021–2030)

The views of Pacific Island countries and territories expressed during formulation of this plan, on their goals for managing coral-reef ecosystems, provide the context for the action areas in the Plan. In order of importance, Pacific Island countries and territories goals for 2021 to 2030, and beyond, are to maintain or improve these areas:

- conservation of biodiversity and habitats
- sustainable fisheries (local/artisanal and commercial)
- reef management, by managing marine protected areas (MPA)
- management of the impact on reefs by development and other disturbances
- food security
- adaptation and resilience to climate change
- benefits from local awareness, custodianship and traditional knowledge
- tourism, including ecotourism.

The goals can be grouped into four priority themes:

- 1 conservation of habitats and biodiversity
- 2 sustainable fisheries and food security
- 3 resilience and adaptation to climate change
- 4 sustainable tourism.

The goal to benefit from local awareness, custodianship and traditional knowledge does not discretely fit into one of the four themes, but makes an important contribution to each of them.



2 Pacific Coral Reefs: Current Status and Key Threats

2.1 State of Pacific Coral Reefs

While coral reefs cover less than 0.1 per cent of the ocean surface, they provide a habitat to 25 per cent of marine species, and a livelihood to half a billion people. The Pacific Ocean is the world's largest ecosystem and it harbours about 25 per cent of the worldwide coral-reef area. The Pacific's coral-reef systems include a diverse range of reef types, such as narrow fringing reefs, rare double barrier reefs, patch reefs and atolls. The Pacific's coastal and marine environments sustain numerous activities that underpin local, sub-national, national and international economies and provide livelihoods and food security for millions of people (SPREP 2020).

SPREP rates the status of ocean health as “fair” and the status of pressures and threats to ocean as “poor” (SPREP 2020). A compilation of coral-reef data from the south Pacific finds that, overall, the region has some of the better-preserved coral reefs in the world. However, many Pacific coral reefs are being impacted by habitat destruction, pollution, fishing and climate change (Moritz et al. 2018); climate change is believed to be the greatest human-induced threat to coral reefs in the Pacific region.

Throughout the Pacific, over-exploitation has reduced many fish stocks and caused ecological shifts that have reduced biodiversity and productivity. Shifts in dominant taxa and ecological structure, as well as declining coral cover, have been detected alongside disturbing reductions of herbivorous fish biomass, which is a group that helps coral reefs become more resilient to climate change. Importantly, the greatest declines in reef health are recorded on coral reefs that surround inhabited islands.

2.2 Current Mechanisms to Protect Coral Reefs

There are many measures already in place to preserve and manage coral reefs in the Pacific. These vary in nature and efficacy from place to place but include legislation and regulations (such as environmental, marine, coastal-development and fisheries legislation), and a wide range of approaches to MPAs. These include protecting reefs through traditional knowledge and customs, contemporary community-management initiatives, and legislated MPAs (such as marine parks, conservation areas, national monuments, key biodiversity areas, Ramsar sites, ra'ui, tabu and taboo areas). Despite these measures, compliance and enforcement can be challenging, particularly across expansive geographic areas.

2.3 Management and Governance of Coral Reefs

Given the diversity of the Pacific region, it may be appropriate for different countries and territories to use different methods to govern coral reefs. In some situations, a centralised governance approach, which includes environmental legislation and environmental impact assessment (EIA) at the country or territory level, may be the most suitable. In other situations, a regional or local governance approach, which considers traditional ownership, may be the best approach. Representatives of our Pacific Island Members, who we consulted while developing this plan, emphasise the need to use a range of management and governance approaches.

2.4 Threats to Coral Reefs

Coral reefs face many local and global threats. These threats come from use and exploitation (such as from fishing and tourism), environment and habitat degradation (such as from coastal developments, pollution and ship grounding), invasive marine species, and climate change. Without significant intervention, the state of ocean health is projected to deteriorate (Moritz et al. 2018).

Pacific Island countries and territories identify that Pacific coral reefs are at medium-to-high risk from environmental factors and human disturbances, which include:

- effects of climate change, such as coral bleaching, ocean acidification and altered biological communities;
- runoff of sediment, caused by deforestation (such as clearance of vegetation for agriculture, mining and forestry);
- discharges and marine pollution from ports, oil terminals, shipping channels, agricultural pesticides and fertilisers, and sewage from residential and tourist centres;
- coastal developments in cities and settlements, and at airports, military bases, mines and tourist resorts;
- destructive fishing and overfishing;
- outbreaks of crown-of-thorns starfish (COTS) (*Acanthaster planci*); and
- outbreaks and spread of coral disease.

Typically, underlying influences drive or exacerbate these factors and disturbances. These influences include rapid population growth, high human dependency on marine resources for ecosystem services (such as food and income), shoreline protection measures, and political and economic (including international trade) drivers.

Representatives of our Pacific Island Members, who we consulted while developing this plan, identify climate change, development and local overfishing as the most severe direct stressors to coral reefs. These are closely followed by terrestrial runoff, coral bleaching and human population growth (see Table 2.1). Multiple countries and territories also recognise degraded water quality, cyclones/typhoons, solid waste pollution and international fishing as key threats to reefs.

In the context of climate change effects, the Intergovernmental Panel on Climate Change (IPCC)'s *Global warming of 1.5°C* special report states that, "The risks of climate-induced impacts are projected to be higher at 2°C than those at global warming of 1.5°C (high confidence). Coral reefs are projected to decline by a further 70–90% at 1.5°C (high confidence) with larger losses (>99%) at 2°C (very high confidence). The risk of irreversible loss of many marine and coastal ecosystems increases with global warming, especially at 2°C or more (high confidence)" (Masson-Delmotte et al. 2019).

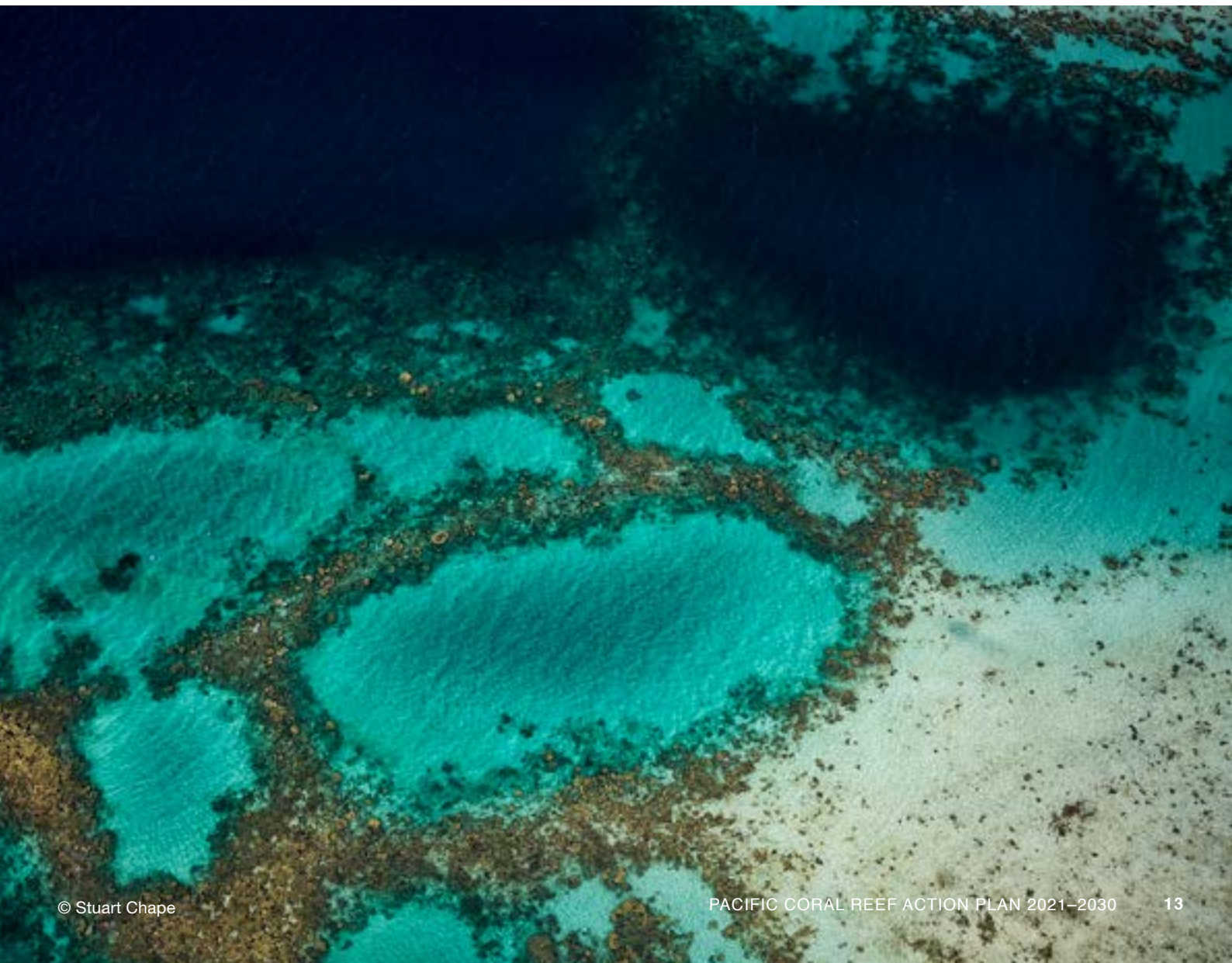
Another study suggests that by 2050, due to ocean acidification, corals may be dissolving faster than they build their hard calcium carbonate structures (Eyre et al. 2018). Due to the combined impacts of climate change, by 2050 coral cover is expected to decrease from current day maximum of 40 per cent of reef cover to 10 to 20 per cent, even if reefs are well-managed locally (Bell et al. 2013). It is therefore essential to make coral reefs more resilient to the effects of climate change, through targeted local management, while also addressing the causes of climate change to ensure a future for coral reefs.

TABLE 2.1. Stressors to coral reefs in the Pacific Region

Source: SPREP Pacific Island Members

Stressor (in order of perceived importance)	Relative severity*
Climate change and coral bleaching	High
Development	High
Overfishing (local)	High
Terrestrial runoff	Moderate
Human population growth	Moderate
Pollution (water quality)	Low
Cyclones/typhoons	Low
Pollution (solid waste)	Low
Overfishing (international)	Low

NOTES: *The severity ratings were identified by consulting with SPREP Members while this plan was being developed. Severity takes into account the number of survey respondents that identified the factor as a threat, and the importance the respondent placed on the threat relative to other threats they identified.



2.5 Barriers to Conserving and Managing Coral Reefs

Managing coral reefs locally is complicated by several global, regional and local challenges. The top three challenges that Pacific stakeholders say they face are:

- lack of funding and resources (e.g. personnel)
- poor planning, management and compliance; and
- lack of capacity and expertise.

The next most common challenges they face are a lack of political will and leadership; inaccessible or insufficient quality data; and the overarching effects of climate change, which could negate any local management incentives if the causes remain unaddressed (see Table 2.2).

Pacific stakeholders identify conserving and restoring habitats, and targeted research and monitoring as priority actions between 2020 and 2030. However, to successfully implement these actions, they need to overcome these key barriers: insufficient funding, capacity, and political will or policies. Individual Pacific Island Members identify various other challenges. These should not be disregarded but may need to be addressed locally, as needed and according to local priorities.

TABLE 2.2. Barriers to conserving and managing coral reefs.

Source: SPREP Pacific Island Members

Barrier	Regional priority*
Lack of funding or resourcing	High
Poor planning, management, compliance and enforcement	High
Lack of capacity, expertise or regional support	High
Insufficient political will or public awareness (for example, about the benefits of conservation)	Moderate
Inaccessible or insufficient quality data (for example, for monitoring)	Moderate
Ongoing watershed degradation	Low
Remoteness and isolation of reefs	Low
Complexity of, and changes to, policies	Low
Poor cooperation by stakeholders or between agencies	Low
Increasing or illegal fisheries or pressures from tourism	Low
Poor coordination and communication	Low
Lack of applied regional initiatives (for example, projects delivered)	Low

* The priorities indicate the number of Pacific Island countries and territories that identified the threat as a key challenge to conserving and managing coral reefs, either locally or regionally

3 Existing Commitments and Initiatives








3.1 Global Commitments

There are several international agreements and policies that apply to conserving and managing coral reefs in the Pacific. Countries and territories have ratified the Convention on Biological Diversity (CBD) multilateral treaty. The CBD has three main goals:

- the conservation of biological diversity (or biodiversity)
- the sustainable use of its (global biodiversity) components
- the fair and equitable sharing of benefits arising from genetic resources.

The CBD's objective is to develop national strategies for conserving and sustainably using biological diversity, including that of coral reefs.

Seven of the Sustainable Development Goals (SDGs) apply directly or indirectly to coral reefs:

	SDG 1 No poverty (coral reefs provide livelihoods)
	SDG 2 Zero hunger (coral reefs provide food)
	SDG 3 Good health and wellbeing (reefs provide healthy sustenance, cultural services and potential medicines)
	SDG 12 Responsible consumption and production (for reefs to be sustainable, production and consumption activities need to be managed)
	SDG 13 Climate action (climate change is a key threat to coral reefs) and reefs provide ecosystem services to mitigate impacts of climate change
	SDG 14 Life below water (coral reefs are a hotspot for underwater biodiversity)
	SDG 15 Life on land (intact coastal watersheds and land vegetation contribute to healthy coral reefs)

SDG 14 (Life below water) is particularly relevant to coral reefs. It aims to conserve and sustainably use the oceans, seas and marine resources, and its ten targets and indicators apply directly to managing coral reefs. The actions outlined in this plan will complement efforts already underway to meet and report on these SDG targets.

The CBD's Post-2020 Global Biodiversity Framework (GBF) will guide conservation and investment over the next 30 years. The GBF contains targets and milestones for the next decade, which this plan aligns with.

The United Nations Decade of Ocean Science for Sustainable Development (2021–2030) will support efforts to reverse a decline in ocean health. It will also create a common framework, which ocean stakeholders worldwide can use, to ensure ocean science fully supports countries improve conditions that oceans need to sustainably develop. As part of this initiative, UNESCO's Intergovernmental Oceanographic Commission (IOC) emphasises that scientific understanding of the ocean's responses to pressures and management action is fundamental for sustainable development (Intergovernmental Oceanographic Commission 2021). Ocean observation and research are also essential to predict the consequences of change, design mitigation and guide adaptation.

The UN Decade on Ecosystem Restoration also offers an opportunity to engage with the international community, build partnerships and attract funding and expertise for coral reefs and associated ecosystems in the Pacific.

Other multilateral environmental agreements will offer opportunities to synergise with this plan and leverage its actions. The UNEP's Regional Seas Programme also presents opportunities that SPREP will explore, in its role as the secretariat for the Convention for the Protection of Natural Resources and Environment of the South Pacific Region (the Noumea Convention).

3.2 Existing Initiatives

Various local, regional and global organisations already have many local and regional initiatives underway to conserve and manage coral reefs. This plan intends to complement, rather than replace, such activities. It also provides strategic guidance from a regional perspective and will support SPREP Members by sharing knowledge and lessons learned.

This section contains a summary of the most relevant existing initiatives that Pacific stakeholders identify.

3.2.1 Regional Initiatives

A wide variety of programmes are already being implemented in the region, although some may target (or be active in) a limited number of countries and territories (see Table 3.1). These initiatives typically originate from overseas governments (such as France and the US), intergovernmental bodies (such as CROP agencies, International Coral Reef Initiative, International Union for Conservation of Nature, UN and EU) or global NGOs (such as World Wildlife Fund, Conservation International, The Nature Conservancy, Wildlife Conservation Society and Coral Sea Foundation). Some initiatives (such as Melanesia Challenge and Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security) target specific nations and are driven by a collaboration between relevant national governments.

The objectives and desired outcomes of these different initiatives are highly consistent, but across the Pacific there is disparity in:

- awareness about the range of existing initiatives;
- opportunities for countries and territories to participate in, and contribute to, the initiatives; and
- appreciation of the potential benefits of the initiatives.

Given the number of existing regional coral-reef programmes, stakeholders can get confused about which organisation are doing what. There is a real risk that, when there is insufficient communication and collaboration between the various programmes, resources and investment are not allocated optimally.

Here are some recent and current initiatives to manage and conserve coral reefs in the Pacific region (see also Table 3.1):

- Biodiversity and Protected Areas Management Programme (BIOPAMA)
- Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security (CTI-CFF)
- CROP Marine Sector Working Group
- French Coral reef Initiative (IFRECOR)
- Global Environment Facility (GEF) Pacific Ridge to Reef (R2R) Programme
- Global Coral Reef Alliance
- International Coral Reef Initiative (ICRI) and associated Global Coral Reef Monitoring Network (GCRMN)
- Locally Managed Marine Areas (LMMA) Network
- Micronesia Challenge's Standardised Marine Monitoring Protocol
- New Zealand–Pacific Partnership on Ocean Acidification (NZPPOA)
- Pacific European Union Marine Partnership Programme (PEUMP), ocean governance and marine spatial planning
- Pacific Ocean Alliance
- Pacific Oceanscape
- US Coral Reef Task Force
- World Wildlife Fund (WWF) Coral Reef Resilience and Coral Reef Rescue Initiatives.

This is not an exhaustive list, but it provides potential starting points for collaboration, streamlining, and sharing resources and knowledge. When appropriate, these existing initiatives should be leveraged to implement the Plan, rather than creating new ones.

Other NGOs are actively working on coral-reef management and conservation in the Pacific region. These NGOs include:

- Corals for Conservation, which is restoring coral, working on bleaching resistance and supporting tourism initiatives in Fiji, Kiribati, Samoa, Tuvalu and Vanuatu;
- Coral Sea Foundation, which is advocating on coral reefs in Melanesia;
- Global Coral Reef Alliance, which is focused on restoring coral in Palau and Vanuatu; and
- The Nature Conservancy, which is working on locally managed fisheries and LMMAs in Federated States of Micronesia (FSM), Guam, Marshall Islands, Northern Mariana Islands (NMI), Palau, Papua New Guinea (PNG) and Solomon Islands.

TABLE 3.1. Existing initiatives to manage and conserve coral reefs in the Pacific region, and countries and territories where they operate*

Initiative	Lead organisation	Wallis and Futuna	Vanuatu	Tuvalu	Tonga	Tokelau	Solomon Islands	Samoa	PNG	Palau	NMI	Niue	New Caledonia	Nauru	Marshall Islands	Kiribati	Guam	FSM	French Polynesia	Fiji	Cook Islands	American Samoa	
BIOPAMA	IUCN	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
CTI-CFF	Governments of Indonesia, Malaysia, PNG, Philippines, Solomon Islands and Timor-Leste						✓		✓														
ICRI and associated Global GCRMN	This is a global initiative involving more than 60 member nations, including some in the Pacific region	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
French Coral Reef Initiative (IFRECOR)	Government of France	✓											✓						✓				
LMMA	LMMA Network						✓		✓	✓	✓	✓								✓			
Micronesia Challenge -- Standardised Marine Monitoring Protocol	National governments of participating countries and territories									✓	✓	✓			✓		✓	✓					
NZPPOA	Secretariat of the Pacific Community (SPC), SPREP and University of the South Pacific					✓										✓				✓			
Pacific Oceanscape	Pacific leader's initiative		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
PEUMP, ocean governance and marine spatial planning	EU and Pacific members of Organisation of African, Caribbean and Pacific States (ACP)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
R2R	UNDP, UNEP and UN FAO Coordinated by SPC		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
US Coral Reef Task Force	Government of the US										✓						✓						
WWF Coral Reef Resilience / Coral Reef Rescue Initiative	WWF						✓													✓			
Various other initiatives	SPREP or SPC		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

NOTES * The Coral Reef Initiative for the South Pacific (CRISP) has recently ended. This French Development Agency and French Permanent Secretariat initiative was hosted by SPC and involved all Pacific countries and territories.

3.2.2 Local Initiatives

While this plan was being developed, representatives from some Pacific countries and territories identified local initiatives, to conserve and manage coral reefs, that their governments, NGOs, universities and communities are leading (see Table 3.2). Many of these initiatives may be underway in more locations than listed in Table 3.2. This highlights inconsistent awareness of the connection between some local initiatives and coral reefs. For example, all Pacific countries and territories are managing their fisheries and conducting EIAs, but they do not always recognise that these activities are directly relevant to conserving and managing coral reefs.

TABLE 3.2. Local initiatives to manage and conserve coral reefs in the Pacific islands region

Initiative	Country reporting the initiative
Coastal fisheries management	Fiji and Solomon Islands
Community-based awareness	Palau
Coral Reef Alliance (CORAL)	Fiji
Coral-reef management (Coral Reef Advisory Group)	American Samoa
Coral-reef restoration	Fiji and NMI
Coral reef strategy	Vanuatu
Coral-reef surveys	FSM
Coral Reef Watch	Fiji
Community-based resource management	Solomon Islands
Crown-of-thorns control	Vanuatu
Custodianship (fostering custodianship by training students to protect the lagoon)	Wallis and Futuna
Established Program to Stimulate Competitive Research (EPSCoR)	Guam
Fish stock assessment	Palau
Fisheries legislation	New Caledonia and Palau
Funafuti Reef Fisheries Stewardship Plan	Tuvalu
Giant clam aquaculture and trade	Palau
Guam Coral Reef Initiative	Guam
Local action strategy groups (climate, fisheries, land-based pollution, restoration)	American Samoa
Locally managed marine and tabu areas	Fiji, FP, FSM, Pacific (general), Solomon Islands, Vanuatu
Long-term marine monitoring	NMI
Marine laboratory research	Guam
Marine spatial planning	Tonga
Monitoring (coral reefs, MPA and ocean acidification)	Palau, New Caledonia, and Wallis and Futuna
Marine Protection Act	Palau
MPA	Fiji, FP, FSM, New Caledonia, Marshall Islands, NMI, Palau, Solomon Islands, Tonga, Vanuatu
NGO networks and initiatives	Various
Outreach and education	NMI
R2R local initiatives	Fiji, Tuvalu
Reef research	Fiji
Sea grant	Guam
Shark sanctuary	Cook Islands and Palau
Watershed management	NMI
Youth 2 Youth programme	FSM

3.3 Pacific Coral Reef Action Plan 2021–2030 commitment

There is an urgent need to act to reduce the risks to coral reefs and make them more resilient. Managing reefs involves all sectors of society and government. The Plan intends to provide focus to all the region's efforts to manage coral reefs, by identifying action areas that can benefit from regional cooperation. The Plan does not intend to overwrite other regional initiatives. It is meant to complement these schemes, and help them focus on the most pressing threats to coral reefs, which countries and territories have themselves identified

Implementing the Plan is the collective responsibility of SPREP Members, the SPREP Secretariat, NGOs and the private sector. It requires CROP agencies, governments, non-state actors and communities to work together.

The SPREP Secretariat will continue to play an important role in supporting the Plan's implementation, by exchanging information, coordinating efforts, building capacity, securing resources, and monitoring and reporting on progress.

Substantial additional resources will be needed to achieve the Plan's goals. We call on all donors and supporters provide the necessary resources to implement the Plan regionally and nationally.



4 Action Plan

4.1 Overview of Action Areas and Objectives

The Plan recommends focusing on eight overarching action areas between 2020 and 2030 (see Table 4.1).

TABLE 4.1. The Plan's action areas and objectives

Action area	Objective
1. Optimise capacity building	To build on and increase capacity of local and regional organisations to monitor, protect and improve the health of coral reefs
2. Foster traditional knowledge and practices	To foster traditional knowledge and support it being applied to managing coral reefs
3. Coordinate education and awareness	To increase communities' and politicians' awareness of the significance of coral reefs for sustenance, coastal protection and the economy; the threats reefs face; and the importance of making coral reefs more resilient
4. Streamline regional and local collaboration	To support agencies, countries and territories, and regional initiatives (including existing initiatives) to work together and share information
5. Conserve reef habitat and biodiversity	To better protect reef habitats against local threats, make coral-reef ecosystems more resilient to climate change, and stop biodiversity loss
6. Prioritise habitat restoration	To restore critical reef habitats, so the ecosystems are healthy, functional, connected and resilient to climate change
7. Improve coastal fisheries management	To manage reef-based fisheries sustainably and limit the impact that fishing has on coral habitats
8. Utilise research and monitoring	To focus and use research and monitoring to investigate the health of coral reefs and the success, or otherwise, of initiatives to manage reefs; and to inform decisions

The Plan's programme logic is presented in Table 4.2. It summarises the links between the goals for Pacific coral reefs (see Section 1.3) and the Plan's action areas, objectives and outcomes.

Each action area has tasks and outcome-based indicators that can be used to evaluate the Plan in the short, medium and long term (see sections 4.2 to 4.9).

TABLE 4.2. The Plan’s programme logic

Goals*	Objectives	Action areas	Short-term outcomes	Medium-term outcomes	Long-term outcomes
<p>Biodiversity and habitats are conserved, and MPAs and disturbances to reefs are managed</p> <p>Coral reefs are resilient and adapted to climate change</p> <p>Reef tourism is sustainable</p>	<p>To build on and increase capacity of local and regional organisations to monitor, protect and improve the health of coral reefs</p>	<p>Optimise capacity building (Tasks listed in Table 4.3)</p>	<ul style="list-style-type: none"> ▪ Increased number of workshops on data management ▪ Increased interest of local students in the marine environment ▪ Funding opportunities collated and distributed (ongoing) 	<ul style="list-style-type: none"> ▪ More streamlined data collection that is comparable between countries and territories ▪ More student enrolments in marine science or related university courses ▪ Increased funding of research and coral-reef management 	<ul style="list-style-type: none"> ▪ Consistent data collection and data management within countries and territories ▪ More qualified local staff to conduct coral-reef science and management ▪ Increased funding of research and coral-reef management
	<p>To foster traditional knowledge and support it being applied to managing coral reefs</p>	<p>Foster traditional knowledge and practices (Tasks listed in Table 4.5)</p>	<ul style="list-style-type: none"> ▪ Communities are more aware of, and interested in, coral-reef health ▪ Communities feel more included in managing coral reefs 	<ul style="list-style-type: none"> ▪ More traditional knowledge is incorporated into policies, plans or management related to coral reefs ▪ Increased community participation in coral-reef management 	<ul style="list-style-type: none"> ▪ Fewer breaches of fishing or MPA policies, or local codes of conduct ▪ Coral reefs are healthier ▪ Communities participate more in managing coral reefs
	<p>To increase communities’ and politicians’ awareness of the significance of coral reefs for sustenance, coastal protection and the economy; the threats reefs face; and the importance of making coral reefs more resilient</p>	<p>Coordinate education and awareness (Tasks listed in Table 4.7)</p>	<ul style="list-style-type: none"> ▪ More content or experiences about the importance of coral reefs incorporated into school curricula ▪ Information material created and disseminated ▪ Increased community awareness of the importance of coral reefs ▪ People mobilised by national concern about climate change 	<ul style="list-style-type: none"> ▪ Communities are more involved in conserving coral reefs ▪ Countries and territories form a strong front and are vocal about the importance of climate-change action 	<ul style="list-style-type: none"> ▪ Reduced effects of local pollution and overfishing on reefs

Goals*	Objectives	Action areas	Short-term outcomes	Medium-term outcomes	Long-term outcomes
<p>Biodiversity and habitats are conserved, and MPAs and disturbances to reefs are managed</p> <p>Coral reefs are resilient and adapted to climate change</p> <p>Reef tourism is sustainable</p>	<p>To support agencies, countries and territories, and regional initiatives (including existing initiatives) to work together and share information</p>	<p>Streamline regional and local collaboration (Tasks listed in Table 4.9)</p>	<ul style="list-style-type: none"> ▪ Regional monitoring database set up ▪ SPREP newsletter on reef initiatives started ▪ Regional monitoring started 	<ul style="list-style-type: none"> ▪ Increased regional collaboration and information sharing ▪ Growing regional database that is accessible to all Members ▪ Collective regional response to bleaching events ▪ National governments recognise the importance of collaborating regionally to improve coral-reef health 	<ul style="list-style-type: none"> ▪ Regional database maintained and growing ▪ Better data is available for managing and monitoring the health of reefs ▪ National governments and agencies work together on initiatives to manage coral reefs ▪ Countries, territories and regional initiatives share their resources and make more strategic investments to benefit the region
			<p>Coral reefs are resilient and adapted to climate change</p>	<p>Conserve reef habitat and biodiversity (Tasks listed in Table 4.11)</p>	<ul style="list-style-type: none"> ▪ More information created and disseminated about the importance of compliance ▪ Less use of single-use plastic ▪ Growing public understanding and disapproval of MPA non-compliance ▪ Communities are more involved in managing coral reefs

Goals*	Objectives	Action areas	Short-term outcomes	Medium-term outcomes	Long-term outcomes
Reef tourism is sustainable	To restore critical reef habitats, so the ecosystems are healthy, functional, connected and resilient to climate change	Prioritise habitat restoration (Tasks listed in Table 4.13)	<ul style="list-style-type: none"> More information material, about the effects of terrestrial runoff and importance of re-vegetation, created and disseminated Increasing awareness of the importance of mangroves, and coastal and terrestrial vegetation and re-vegetation, on coral reefs 	<ul style="list-style-type: none"> Increased mangrove and coastal re-vegetation Increased interest of communities and national governments in restoring reefs Increased awareness of governments and NGOs of potential approaches to restoring reefs Reduced clearance of mangroves and coastal vegetation 	<ul style="list-style-type: none"> Increased shore protection (through more mangrove habitats) Less terrestrial runoff to reef habitats Continued restoration of corals identified as resistant to bleaching New reef-restoration initiatives underway
Fisheries are sustainable and food sources are secure	To manage reef-based fisheries sustainably and limit the impact that fishing has on coral habitats	Improve coastal fisheries management (Tasks listed in Table 4.15)	<ul style="list-style-type: none"> Local programmes to monitor fisheries implemented in some countries and territories Information material about alternative livelihoods, and the link between overfishing and human population growth, created and distributed 	<ul style="list-style-type: none"> Monitoring programmes provide information on overfished species Guidelines formulated for catch limits of target species Improved programmes to monitor reef fisheries 	<ul style="list-style-type: none"> Overfished target species on track to recovery Continued monitoring programmes and catch limitations
Knowledge base to effectively monitor and evaluate coral reefs is improved	To focus and use research and monitoring to investigate the health of coral reefs and the success, or otherwise, of initiatives to manage reefs; and to inform decisions	Utilise research and Monitoring (Tasks listed in Table 4.17)	<ul style="list-style-type: none"> Increased awareness of the importance of monitoring and evaluation for effective reef management Regional reef-monitoring programme implemented 	<ul style="list-style-type: none"> Important coral source reefs in the region identified Increased applied research, monitoring and evaluation Regional reef-monitoring programme ongoing and yielding useful data for Members to monitor reef health 	<ul style="list-style-type: none"> Results of research and monitoring used to manage reefs Regional reef-monitoring programme ongoing Reef-health trends and possible interventions identified

NOTES *The goals align with SDG 1, 2, 3, 12, 14 and 15.

4.2 Action Area 1: Optimise Capacity Building

TABLE 4.3. Details of tasks related to Action Area 1

ACTION AREA 1 • OPTIMISE CAPACITY BUILDING			
OBJECTIVE: To build on and increase capacity of local and regional organisations to monitor, protect and improve the health of coral reefs			
Tasks	Priority	Suggested Lead Organisations	Related tasks
1 Incentivise students to enter marine sciences and coastal management professions	Low	Members	1.2
2 Provide early-career professionals with opportunities and support to work on coral-reef management	Medium	Members	1.1
3 Identify funding opportunities for coral-reef management and research and communicate them to Members	High	SPREP CROP agencies	1.1 & 1.4
4 Communicate funding opportunities for climate adaptation and resilience as possible funding sources for coral-reef initiatives	Medium	SPREP CROP agencies	1.3
5 Identify regionally appropriate monitoring indicators of reef health, and associated social indicators	High	SPREP	1.6 4.1 & 4.2
6 Conduct regional workshops on regionally consistent data collection and management, and establish mechanisms for regional knowledge exchange (see also action area 8)	High	SPREP NGOs CROP agencies PCCC PCCOS	1.5 4.1 & 4.2 8.3
7 Conduct local workshops on the proposed data collection and data management (that is, aligned with the regional approach) (see also action area 8)	Medium	Members CROP agencies	1.5 4.1 & 4.2 8.1 & 8.3
8 Identify skills and capacity that governments and other stakeholders need to effectively manage coral reefs	High	SPREP Members	1.9
9 Following task 1.8, supply training or experience to close skills gap	High	SPREP Members	1.8
10 Encourage donors to fund more staff, when personnel is limiting capacity	Medium	Members	1.3 & 1.4
11 Establish a database of experts that are willing for countries and territories to ask them questions about coral-reef research and management	Low	SPREP	6.5, 6.6, 6.7 & 6.10
12 Investigate options (such as funding opportunities and public-private partnerships) to finance capacity building (projects and personnel)	High	SPREP	6.6

TABLE 4.4. Outcomes related to Action Area 1

ACTION AREA 1 • OPTIMISE CAPACITY BUILDING	
Timeframe	Outcome
Short term (2 years)	<ul style="list-style-type: none"> ▪ Appropriate monitoring indicators identified ▪ Increased number of workshops on data management ▪ Funding opportunities continue to be collated and distributed
Medium term (5 years)	<ul style="list-style-type: none"> ▪ More streamlined data collection that is comparable between countries and territories ▪ Increased funding of research and coral-reef management
Long term (10 years)	<ul style="list-style-type: none"> ▪ Consistent data collection and management within countries and territories ▪ More qualified local staff to conduct coral-reef science and management ▪ Increased funding of research and coral-reef management



4.3 Action Area 2: Foster Traditional Knowledge and Practices

TABLE 4.5. Details of tasks related to Action Area 2

ACTION AREA 2 • FOSTER TRADITIONAL KNOWLEDGE AND PRACTICES			
OBJECTIVE: To foster traditional knowledge and support it being applied to managing coral reefs			
Tasks	Priority	Lead	Related tasks
1 Continue to seek ways to incorporate traditional knowledge into management and policy planning promoting local responsibility for reef stewardship	High	Members	1.5 2.3 5.11
2 Support traditional stewardship activities that improve the health and resilience of coral reefs and are consistent with the Plan's goals	Medium	Members	1.6 5.11
3 Support documentation of relevant traditional knowledge	Low	Members	2.1
4 Integrate traditional knowledge and customary practices into sustainable tourism activities to foster stewardship and share knowledge	Medium	Members	1.13 5.16

TABLE 4.6. Outcomes related to Action Area 2

ACTION AREA 2 • FOSTER TRADITIONAL KNOWLEDGE AND PRACTICES	
Timeframe	Outcome
Short term (2 years)	<ul style="list-style-type: none"> ▪ Communities are more aware of, and interested in, coral-reef health ▪ Communities feel more included in managing coral reefs
Medium term (5 years)	<ul style="list-style-type: none"> ▪ More traditional knowledge is incorporated into policies, plans or management related to coral reefs ▪ Increased community participation in coral-reef management
Long term (10 years)	<ul style="list-style-type: none"> ▪ Fewer breaches of fishing or MPA policies, or local codes of conduct ▪ Coral reefs are healthier ▪ Communities participate more in managing coral reefs

4.4 Action Area 3: Coordinate Education and Awareness

TABLE 4.7. Details of tasks related to Action Area 3

ACTION AREA 3 • COORDINATE EDUCATION AND AWARENESS			
OBJECTIVE: To increase communities' and politicians' awareness of the significance of coral reefs for sustenance, coastal protection and the economy; the threats reefs face; and the importance of making coral reefs more resilient			
Tasks	Priority	Lead	Related tasks
1 Encourage inclusion of material in school curricula, on the importance of coral reefs, threats to coral reefs and management of coral reefs	Medium	Members	1.1
2 Develop and disseminate public information on the importance of coral reefs for Pacific islands (for example their role in coastal protection, protein supply, fisheries and productivity of non-reef fish) and the threats reefs face, using various media (such as verbal, digital and print)	Low	SPREP Members	3.3
3 Coordinate a regional approach to informing representatives of national governments about the importance of conserving coral reefs to the prosperity of Pacific islands; the contribution of coral reefs to protecting coastlines in the face of rising sea levels; and the economic value of coral reefs to tourism and fisheries. This task should not only be targeted more broadly than representatives working with coral reefs	High	SPREP	3.2
4 Provide communities with information on herbivores (such as parrotfish, unicornfish and rabbitfish) that make coral reefs more resilient, to raise their awareness of how overfishing these species affects reefs	Low	SPREP Members	5.3 7.3
5 Promote the benefits of involving communities in coral-restoration and mangrove-restoration projects through opportunities like school fieldtrips. This task reflects the importance of connecting diverse seascapes	Medium	SPREP Members	6.5, 6.7 & 6.8
6 Provide and disseminate information on the science and effects of climate change, as they relate to coral reefs. Highlight the importance of the region standing together against inaction on climate change	High	SPREP Members	

TABLE 4.8. Outcomes related to Action Area 3

ACTION AREA 3 • COORDINATE EDUCATION AND AWARENESS	
Timeframe	Outcome
Short term (2 years)	<ul style="list-style-type: none"> ▪ More content or experiences about the importance of coral reefs incorporated into school curricula ▪ Information material created and disseminated ▪ Increased community awareness of the importance of coral reefs for Pacific islands ▪ People mobilised by national concern about climate change
Medium term (5 years)	<ul style="list-style-type: none"> ▪ Communities are more involved in conserving and restoring coral reefs and seascapes ▪ Countries and territories form a strong front and are vocal about the importance of climate-change action
Long term (10 years)	<ul style="list-style-type: none"> ▪ Reduced effects of local pollution and overfishing on reefs

4.5 Action Area 4: Streamline Regional and Local Collaboration

TABLE 4.9. Details of tasks related to Action Area 4

ACTION AREA 4 • STREAMLINE REGIONAL AND LOCAL COLLABORATION			
OBJECTIVE: To support agencies, countries and territories, and regional initiatives (including existing initiatives) to work together and share information			
Tasks	Priority	Lead	Related tasks
1 Create and promote a regional 'Reef Report Card' or 'State of the Reefs' monitoring programme with guidelines to standardise surveys, analysis and reporting. The programme will complement existing reporting such as Framework for a Pacific Oceanscape Results Framework, State of Environment and Conservation (SOEC), and Pacific Ocean Accounts	High	SPREP	1.5 & 1.6 8.3
2 Create a regional database containing results from the 'Reef Report Card' or 'State of the Reefs' monitoring programme	High	SPREP	1.5 & 1.6 & 1.8 8.3
3 Develop a system that provides an early alert of a crown-of-thorns outbreak, to enable a fast regional response (this could be included in the 'Reef Report Card' or 'State of the Reefs' monitoring programme)	Low	SPREP Members	
4 Enable practitioners and managers to share their knowledge about practices and activities to restore and manage coral reefs, and their outcomes. This task may use the Inform data portals, SOEC and GCRMN	High	SPREP	3.6
5 Incentivise local governments to manage coral reefs well, by highlighting great initiatives and regional leadership to all countries and territories (such as through a SPREP newsletter)	Medium	SPREP	
6 Maintain a regional databases and regional communication (this includes prioritising resources to engage meaningfully on reefs)	High	SPREP	4.2
7 Inform representatives of national governments on the benefits of regional reef management initiatives	Low	SPREP	
8 Encourage reef managers to attend relevant conferences and forums (such as the Asia-Pacific Coral Reef Symposium, Society for Conservation Biology Oceania conferences, International Coral Reef Symposium 2025 and Pacific-ASEAN information exchange) to expose them to new science and lessons	High	SPREP	
9 Ensure countries and territories have a clear line of responsibility for coral reefs (such as to an environment or fisheries ministry). If multiple agencies share responsibility, ensure their roles and accountabilities are defined, and they are encourage to work together and cooperate effectively	Medium	Members	4.10
10 Encourage a country's or territory's different government departments to work together when they have responsibilities that influence reef health (this includes environment, fisheries, agriculture, education and planning departments)	High	Members	4.9 5.15

TABLE 4.10. Outcomes related to Action Area 4

ACTION AREA 4 • STREAMLINE REGIONAL AND LOCAL COLLABORATION	
Timeframe	Outcome
Short term (2 years)	<ul style="list-style-type: none"> ▪ Regional monitoring database set up ▪ SPREP newsletter on reef initiatives started ▪ Regional monitoring started and report card, or similar approach, developed
Medium term (5 years)	<ul style="list-style-type: none"> ▪ Increased collaboration and information sharing within the region ▪ Growing regional database that is accessible to all Members ▪ Collective regional response to bleaching events ▪ National governments recognise the importance of collaborating regionally to improve coral-reef health
Long term (10 years)	<ul style="list-style-type: none"> ▪ Regional database maintained and growing ▪ Better data is available for managing and monitoring the health of reefs ▪ National governments and agencies work together on initiatives to manage coral reefs ▪ National Governments, Regional Organisations, share their resources and make more strategic investments to benefit the region



4.6 Action Area 5: Conserve Reef Habitat and Biodiversity

TABLE 4.11. Details of tasks related to Action Area 5

ACTION AREA 5 • CONSERVE REEF HABITAT AND BIODIVERSITY			
OBJECTIVE: To better protect reef habitats against local threats, make coral-reef ecosystems more resilient to climate change, and stop biodiversity loss			
Tasks	Priority	Lead	Related tasks
1 Disseminate information to fishers that highlights why it is important to comply with MPAs and other conservation measures (for example, even removals of small numbers of some species can reduce effectiveness). This information material could also highlight how non-compliance affects citizens who follow the rules, and encourage fishers to report perpetrators	High	SPREP Members	
2 Prioritise funds for enforcing MPAs and other conservation measures (for example, to fund enforcement personnel or technology), including measures related to land-derived threats (such as disposing of household and industrial waste inappropriately)	High	Members	
3 Determine which are the keystone herbivores that build reef resilience (for example, herbivores that limit excessive macroalgae growth from nutrient loading) and protect them	Low	Members	3.4 7.3
4 Provide permanent moorings in tourism-intensive areas and regulate against anchors	Low	Members	
5 Disseminate research about MPA design to national MPA managers who are creating new MPAs or due to review existing MPAs, and encourage them to use data or research to design MPAs	Medium	SPREP Members	5.10 & 5.12 8.1
6 Clearly communicate, to local authorities, the effects of development activities on the health and resilience of coral reefs; and strengthen how coral-reef health is considered during development approvals and EIA (for example, using an integrated coastal-management approach and R2R that include reducing inputs from land-derived pollutants)	High	SPREP Members	5.7 6.1
7 Support people working on development projects by helping them plan, assess and monitor developments, and conduct EIA; and share information, with relevant organisations, on how the projects affects reefs	High	SPREP	5.6 6.1
8 Inform the public about the effects of single-use plastic (especially bags) on reef organisms; and phase out single-use plastic or incentivise alternatives (such as reusable bags and cups)	Low	Members	
9 Create and disseminate information about the importance of managing connections between different habitats	Low	SPREP Members	5.10 6.2 & 6.4
10 Include more mangroves and wetlands in MPAs	Medium	SPREP Members	5.9 6.2 & 6.4
11 Support community-based management initiatives (such as LMMA) to be implemented	High	SPREP Members	2.1 & 2.2

ACTION AREA 5 • CONSERVE REEF HABITAT AND BIODIVERSITY			
OBJECTIVE: To better protect reef habitats against local threats, make coral-reef ecosystems more resilient to climate change, and stop biodiversity loss			
Tasks	Priority	Lead	Related tasks
12 Assist governments to develop or improve legislation on managing coral reefs	Medium	SPREP	5.5 & 5.10 8.1
13 Identify reefs that act as sources of coral larvae for other reefs. These reefs should be protected and, when necessary, restored, because they are a source of propagules for natural regeneration elsewhere	High	Members SPREP	1.11 5.13 6.5, 6.6 & 6.7 8.4
14 Seek to expand the MPA network, to increase the range of habitats protected and connectivity between local, national and regional scales	Medium	SPREP	5.9
15 Endorse and support regional initiatives that are advocating for climate-change mitigation to happen sooner	Medium	Members	4.9 & 4.10
16 Identify and address local causes of coral loss (such as COTS, trampling and tourism) to maximise reef resilience	High	Members	2.2 5.2, 5.4 & 5.11 6.8
17 Develop guidelines to regulate coral-harvesting activities	High	SPREP Members	5.12 & 5.13

TABLE 4.12. Outcomes related to Action Area 5

ACTION AREA 5 • CONSERVE REEF HABITAT AND BIODIVERSITY	
Timeframe	Outcome
Short term (2 years)	<ul style="list-style-type: none"> ▪ More information created and disseminated about the importance of compliance ▪ Less use of single-use plastic ▪ Growing public understanding and disapproval of MPA non-compliance ▪ Communities are more involved in managing coral reefs
Medium term and long term (5 to 10 years)	<ul style="list-style-type: none"> ▪ Further decrease in use of single-use plastic ▪ Reefs are more resilient to the effects of climate change ▪ Communities are more involved in managing coral reefs ▪ More MPAs include connected ecosystems (such as mangroves) ▪ Coral-reef health appropriately considered and managed in the formal approval of development projects ▪ Increased MPA compliance ▪ Governments of countries and territories increasingly use and streamline legislation on coral reefs

4.7 Action Area 6: Prioritise Habitat Restoration

TABLE 4.13. Details of tasks related to Action Area 6

ACTION AREA 6 • PRIORITISE HABITAT RESTORATION			
OBJECTIVE: To restore critical reef habitats, so the ecosystems are healthy, functional, connected and resilient to climate change			
Tasks	Priority	Lead	Related tasks
1 Develop information material that highlights the benefits of re-vegetation in areas near waterways and coasts (re-vegetation decreases coastal erosion and terrestrial runoff) and the effects that re-vegetation has on coral reefs and natural reef regeneration (through integrated coastal management and R2R perspectives, re-vegetation reduces pollution runoff)	Medium	SPREP	5.6 & 5.7
2 Develop promotional material that highlights the benefits of integrated coastal management and restoring mangroves and wetlands (such as blue carbon, making coral reefs more resilient and protecting coastlines)	Low	SPREP	5.9, 5.10 & 5.12 6.3, 6.4
3 Encourage restoration of waterways, catchments, coastal ecosystems, and other nature-based solutions to making reefs resilient.	High	Members	5.9 & 5.10 6.2 & 6.4
4 Create partnerships between schools and NGOs that are restoring reefs and mangroves, so students have field trips that include restoration activities	Low	Members	3.5 5.9 & 5.10 6.2 & 6.3
5 Create an online resource of opportunities for tourists to get involved in restoring reefs	Low	SPREP	1.11 3.5 6.6 & 6.7
6 Create and coordinate a regional approach to identifying bleaching-resistant corals. Prioritise these corals when restoring reefs	Medium	SPREP Members	1.11 6.5 & 6.7 8.4
7 Identify reefs that act as sources of coral larvae for other reefs. These reefs should be protected and, when necessary, restored, because they are a source of propagules for natural regeneration elsewhere	High	Members SPREP	1.11 5.13 6.5 & 6.6 8.4
8 Increase awareness of the range of available methods to restore reefs (such as nature-based solutions and options to encourage natural regeneration)	Medium	SPREP	6.1 & 6.7
9 Develop a process to identify and prioritise reef-restoration sites and nature-based solutions, to achieve multiple benefits (such as reduced coastal erosion, improved biodiversity or increased fisheries productivity)	High	SPREP	6.7 & 6.9
10 Identify and pursue finance or funding mechanisms for restoring reefs on a local, national and regional scale. Focus on sustainable financing and funding, and sustainable blue-economy activities	High	SPREP	1.11

TABLE 4.14. Outcomes related to Action Area 6

ACTION AREA 6 • PRIORITISE HABITAT RESTORATION	
Timeframe	Outcome
Short term (2 years)	<ul style="list-style-type: none"> ▪ More Information material, about the effects of terrestrial runoff and the importance of re-vegetation, created and disseminated ▪ Increasing awareness of the importance of mangroves, and coastal and terrestrial vegetation and re-vegetation, on coral reefs
Medium term (5 years)	<ul style="list-style-type: none"> ▪ Increased mangrove and coastal re-vegetation ▪ Increased interest of communities and national governments in restoring reefs ▪ Increased awareness of governments and NGOs of potential approaches to restoring reefs ▪ Reduced clearance of mangroves and coastal vegetation ▪ Targeted reef-restoration activities underway
Long term (10 years)	<ul style="list-style-type: none"> ▪ Increased shore protection (through more mangrove habitats) ▪ Less terrestrial runoff through to reef habitats ▪ Continued restoration of corals identified as resistant to bleaching ▪ New reef-restoration initiatives underway



4.8 Action Area 7: Improve Coastal Fisheries Management

TABLE 4.15. Details of tasks related to Action Area 7

ACTION AREA 7 • IMPROVE COASTAL FISHERIES MANAGEMENT			
OBJECTIVE: To manage reef-based fisheries sustainably and limit the impact that fishing has on coral habitats			
Tasks	Priority	Lead	Related tasks
1 Implement a programme to monitor areas of high-intensity fishing (monitor reef-fisheries catch and the effects of fishing on reef condition)	Medium	Members	7.2 & 7.4
2 Support community-based initiatives to manage reef fisheries sustainably	High	Members SPREP	7.1
3 Where macroalgae is problematic, reduce extraction of herbivorous reef fish	Medium	Members	3,4 & 5.3
4 Close known key spawning locations to fishing, temporarily during spawning events of locally harvested species	Medium	Members	7.1
5 Disseminate information material that highlights the connection between overfishing and human population growth. (Each person may still fish the same amount, but a bigger population means the rate of fishing has a bigger impact than in previous generations)	Low	SPREP	
6 Reduce the volume of abandoned, lost or otherwise discarded fishing gear entering the marine environment (in other words, reduce ghost fishing and plastic pollution)	High		

TABLE 4.16. Outcomes related to Action Area 7

ACTION AREA 7 • IMPROVE COASTAL FISHERIES MANAGEMENT	
Timeframe	Outcome
Short term (2 years)	<ul style="list-style-type: none"> ▪ Local programmes to monitor fisheries implemented in some countries and territories ▪ Information material about alternative livelihoods, and the link between overfishing and population growth, created and distributed
Medium term (5 years)	<ul style="list-style-type: none"> ▪ Monitoring programmes provide information on overfished species ▪ Guidelines formulated for catch limits of target species ▪ First catch limits for key species are being implemented ▪ More countries and territories implement programmes to monitor fisheries
Long term (10 years)	<ul style="list-style-type: none"> ▪ Overfished target species on track to recovery ▪ Continued monitoring programmes and catch limitations

4.8 Action Area 8: Utilise Research and Monitoring

TABLE 4.17. Details of tasks related to Action Area 8

ACTION AREA 8 • UTILISE RESEARCH AND MONITORING			
OBJECTIVE: To focus and use research and monitoring to investigate the health of coral reefs and the success, or otherwise, of initiatives to manage reefs; and to inform decisions			
Tasks	Priority	Lead	Related tasks
1 Raise awareness of the importance of monitoring and evaluation to reef-management, conservation, resilience and restoration initiatives. Monitoring and evaluation support informed decision-making, which makes reef management more effective	High	SPREP Members	1.5, 1.6 & 1.7 5.5, 5.10 & 5.12
2 Encourage research on the connectivity between regional reefs, and identify important coral propagule source reefs	Medium	SPREP Members	8.5
3 Establish and continue a regional reef-monitoring programme that collects the same information in all countries and territories. The programme should foster community stewardship and participation. The reporting should align with existing reporting pathways including GCRMN, SOEC and INFORM	High	SPREP Members	1.5, 1.6 & 1.7 4.1 & 4.2
4 Identify heat-tolerant coral species and trial using these in restoration efforts	Low	SPREP Members	3.5 6.6 & 6.7 8.5
5 Engage with the UN Decade on Ocean Science for Sustainable Development and ICRI, and connect with international reef-restoration researchers to encourage research in the Pacific	Medium	SPREP Members	8.2 & 8.4

TABLE 4.18. Outcomes related to Action Area 8

ACTION AREA 8 • UTILISE RESEARCH AND MONITORING	
Timeframe	Outcome
Short term (2 years)	<ul style="list-style-type: none"> ▪ Increased awareness of the importance of monitoring and evaluation for effective reef management ▪ Regional reef-monitoring programme implemented
Medium term (5 years)	<ul style="list-style-type: none"> ▪ Important coral source reefs in the region identified ▪ Increased applied research, monitoring and evaluation ▪ First heat-tolerant coral species identified (species may vary across) the Region ▪ Regional reef-monitoring programme ongoing and yielding useful data for Members to monitor reef health
Long term (10 years)	<ul style="list-style-type: none"> ▪ Results of research and monitoring used to manage reefs ▪ Regional reef-monitoring programme ongoing ▪ Reef-health trends and possible interventions identified

5 Implementation Considerations

5.1 Implementation 2021–2030

Managing coral-reef ecosystems must be done cooperatively and across sectors, as the threats that reefs face span the responsibilities of multiple sectors. SPREP will oversee the implementation of this plan, and work with Members to foster cooperation between sectors and different organisations. Implementing this plan will require all actors to use a cooperative and adaptive approach, and consult with CROP agencies and national governments.

The preliminary regional priorities can be based on the high-priority reef stressors (see Table 2.1) and challenges to managing coral reefs (see Table 2.2) already identified.

Beyond the region's priority themes for managing coral reefs (see Section 1.4), the most pressing threats and challenges vary between countries and territories. Therefore, a locally targeted approach can be used to identify actions that will address particular concerns.

Appendix A cross-references the action-area tasks with the key threats faced by coral reefs and the challenges of managing them. This tool can be used to:

- 1 prioritise national tasks, which will guide investment and help schedule priorities (this involves aligning national and local priority tasks with the nation's unique threats and challenges); and
- 2 secure national and local buy-in, by demonstrating which local threats or challenges will be addressed by undertaking particular tasks.

It is essential that implementing this plan builds capacity, across the Pacific, to continue managing coral reefs. This includes developing and using science and traditional knowledge. Mobilising resources to provide this capacity in Pacific Island countries and territories will be an ongoing focus of implementing this plan.

5.2 Evaluation and Planning Beyond 2030

The Plan should be monitored throughout its duration, by evaluating achievements against the short-, medium- and long-term outcomes expected for each action area. Evaluation should be undertaken using a tailored monitoring, evaluation and reporting plan (MER plan), which SPREP will develop with its Pacific Island Members. This will be one of the first priorities.

The MER plan will incorporate the following principles.

- 1 Use, and build upon, existing monitoring methods used globally or in the Pacific region.
- 2 Prioritise establishment of baseline data on status and health.
- 3 Use approaches that ensure monitoring is sustainable, so progress can continue to be tracked in the long term.
- 4 Use simple, readily available technology that can upload data to existing data platforms.
- 5 Where possible, incorporate citizen science and community monitoring.
- 6 Use approaches that are compatible with SOEC reporting, global biodiversity indicators, and SDG targets.

Given the threats to coral reefs, from global anthropogenic effects, are increasing, efforts to conserve coral reefs will have to continue well beyond 2030. They may need to be stronger and adapted to emerging ecosystem priorities. This current plan should therefore be adapted, if necessary, and a new plan for the period beyond 2030 should be initiated well before this plan ends.

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APPENDIX A Alignment between Action Areas and Key National Threats and Challenges

TABLE 6.1 Summary of linkages between key stressors/challenges and Action Area tasks (Action Areas 1 and 2)

KEY THREATS AND CHALLENGES	ACTION AREA 1 CAPACITY BUILDING												ACTION AREA 2 FOSTER TRADITIONAL KNOWLEDGE AND CUSTOMARY PRACTICES			
	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	1.10	1.11	1.12	2.1	2.2	2.3	2.4
Key Reef Stressors																
Climate Change / coral bleaching																
Development														X	X	X
Overfishing (local)														X	X	X
Terrestrial Runoff														X	X	X
Human Population Growth															X	
Pollution (water)														X	X	X
Cyclones / typhoons																
Pollution (solid waste)														X	X	X
Overfishing (international)															X	
Key Management Barriers																
Lack of funding or resourcing			X	X					X	X		X				
Poor planning, management and compliance enforcement								X	X				X	X	X	X
Lack of capacity, expertise or regional support	X	X				X	X	X	X	X	X	X	X	X	X	
Insufficient political will and/or public awareness													X	X		X
Data inaccessibility or lack of quality data					X	X	X									
Watershed degradation																
Geography (reef remoteness and isolation)																
Policy complexity and policy change																
Poor stakeholder cooperation, incl. inter-agency														X	X	
Increasing illegal fisheries and/or tourism pressures																X
Poor coordination & communications						X	X				X					
Lack of application of regional initiatives (on-ground)					X	X	X				X	X				

TABLE 6.2 Summary of linkages between key stressors/challenges and Action Area tasks (Action Areas 3 and 4)

KEY THREATS AND CHALLENGES	ACTION AREA 3 INCREASE COORDINATED EDUCATION AND AWARENESS						ACTION AREA 4 STREAMLINE REGIONAL COLLABORATION									
	3.1	3.2	3.3	3.4	3.5	3.6	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	4.10
Key Reef Stressors																
Climate Change / coral bleaching	X	X	X		X	X	X	X			X				X	X
Development	X	X	X								X				X	X
Overfishing (local)	X	X	X	X			X	X			X				X	X
Terrestrial Runoff	X	X	X						X		X				X	X
Human Population Growth	X	X	X								X				X	X
Pollution (water)	X	X	X				X	X	X		X				X	X
Cyclones / typhoons	X	X	X		X						X				X	X
Pollution (solid waste)	X	X	X								X				X	X
Overfishing (international)	X	X	X								X				X	X
Key Management Barriers																
Lack of funding or resourcing			X												X	X
Poor planning, management and compliance enforcement			X				X	X	X	X	X	X	X		X	X
Lack of capacity, expertise or regional support										X	X	X	X	X		
Insufficient political will and/or public awareness	X	X	X	X	X	X	X	X			X		X		X	X
Data inaccessibility or lack of quality data							X	X	X		X					
Watershed degradation	X	X													X	X
Geography (reef remoteness and isolation)																
Policy complexity and policy change			X												X	X
Poor stakeholder cooperation, incl. inter-agency			X									X	X		X	X
Increasing illegal fisheries and/or tourism pressures	X	X													X	X
Poor coordination and communications							X	X		X	X	X	X		X	X
Lack of application of regional initiatives (on-ground)			X				X	X					X		X	X

TABLE 6.3 Summary of linkages between key stressors/challenges and Action Area tasks (Action Areas 5 and 6)

KEY THREATS AND CHALLENGES	ACTION AREA 5 CONSERVE REEF HABITATS AND BIODIVERSITY																ACTION AREA 6 PRIORITISE HABITAT RESTORATION										
	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8	5.9	5.10	5.11	5.12	5.13	5.14	5.15	5.16	6.1	6.2	6.3	6.4	6.5	6.6	6.7	6.8	6.9	6.10	
Key Reef Stressors																											
Climate Change / coral bleaching		X											X	X	X	X			X	X	X	X	X	X	X	X	X
Development		X		X	X	X	X		X	X		X		X		X	X	X	X	X							
Overfishing (local)	X	X			X					X	X		X		X												
Terrestrial Runoff									X	X					X	X	X	X	X								
Human Population Growth										X					X			X									
Pollution (water)		X	X						X	X					X	X	X	X							X	X	X
Cyclones / typhoons													X	X		X		X	X	X			X	X	X	X	X
Pollution (solid waste)		X						X		X					X		X										
Overfishing (international)		X			X						X				X												
Key Management Barriers																											
Lack of funding or resourcing							X			X											X				X	X	
Poor planning, management and enforcement		X		X	X	X	X		X	X	X		X	X		X	X	X	X			X	X		X		
Lack of capacity, expertise or regional support					X	X	X												X		X		X		X		X
Insufficient political will and/or public awareness	X				X		X	X		X	X			X		X	X		X	X					X		
Data inaccessibility or lack of quality data																X						X	X				X
Watershed degradation									X						X	X	X	X	X								
Geography (reef remoteness and isolation)										X				X													
Policy complexity and policy change					X	X					X																
Poor stakeholder cooperation								X	X					X	X		X	X		X							
Increasing illegal fisheries and/or tourism pressures		X	X													X										X	
Poor coordination and communications					X	X	X									X											
Lack of application of regional initiatives					X	X				X			X		X	X	X	X	X	X	X			X	X	X	

TABLE 6.4 Summary of linkages between key stressors/challenges and Action Area tasks (Action Areas 7 and 8)

KEY THREATS AND CHALLENGES	ACTION AREA 7 IMPROVE COASTAL FISHERIES MANAGEMENT						ACTION AREA 8 UTILISE RESEARCH AND MONITORING				
	7.1	7.2	7.3	7.4	7.5	7.6	8.1	8.2	8.3	8.4	8.5
Key Reef Stressors											
Climate Change / coral bleaching			X				X	X	X	X	X
Development							X		X		X
Overfishing (local)	X	X	X	X	X	X	X		X		X
Terrestrial Runoff							X		X		X
Human Population Growth					X		X		X		X
Pollution (water)							X		X		X
Cyclones / typhoons							X		X		X
Pollution (solid waste)						X	X		X		X
Overfishing (international)	X	X	X	X	X	X	X		X		X
Key Management Barriers											
Lack of funding or resourcing		X									X
Poor planning, management and compliance enforcement	X	X	X	X			X	X	X		
Lack of capacity, expertise or regional support		X									X
Insufficient political will and/or lack of public awareness		X			X	X	X		X		
Data inaccessibility or lack of quality data	X	X					X	X	X		X
Watershed degradation									X		
Geography (reef remoteness and isolation)		X						X			
Policy complexity and policy change											
Poor stakeholder cooperation, incl. inter-agency		X				X	X		X		
Increasing illegal fisheries and/or tourism pressures		X		X					X		
Poor coordination and communications							X	X	X		
Lack of application of regional initiatives (on-ground)	X	X		X		X	X	X	X		X

NOTES * Does not reduce the effects or causes of climate change, but communicating early signs of bleaching signs can highlight the extent of bleaching to raise awareness of the rest of the world.

^Helps reduce the impact of this threat or stressor, but does not address the cause of the stressor.

