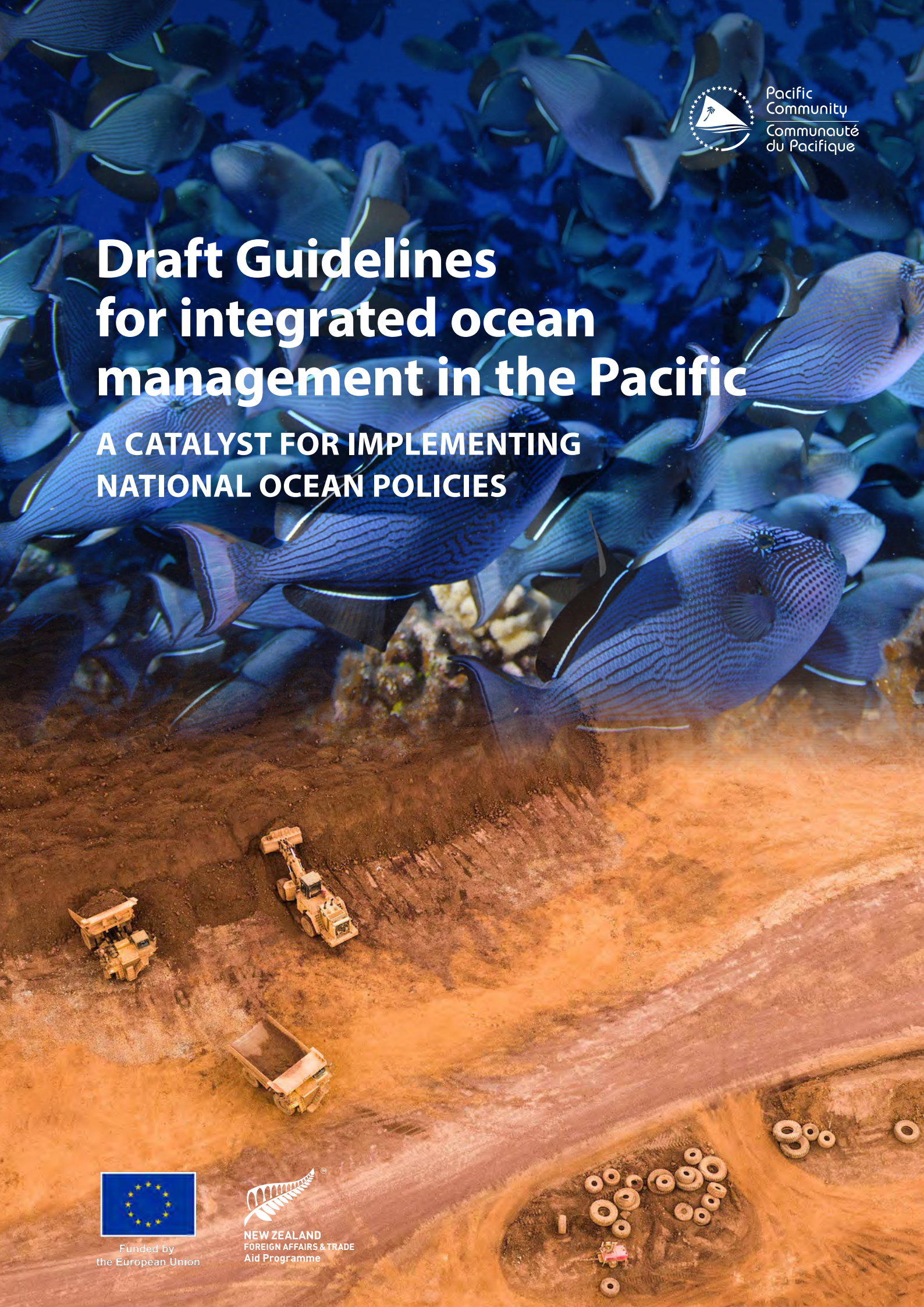

Pacific Community
Communauté du Pacifique

Draft Guidelines for integrated ocean management in the Pacific

A CATALYST FOR IMPLEMENTING NATIONAL OCEAN POLICIES

Funded by the European Union

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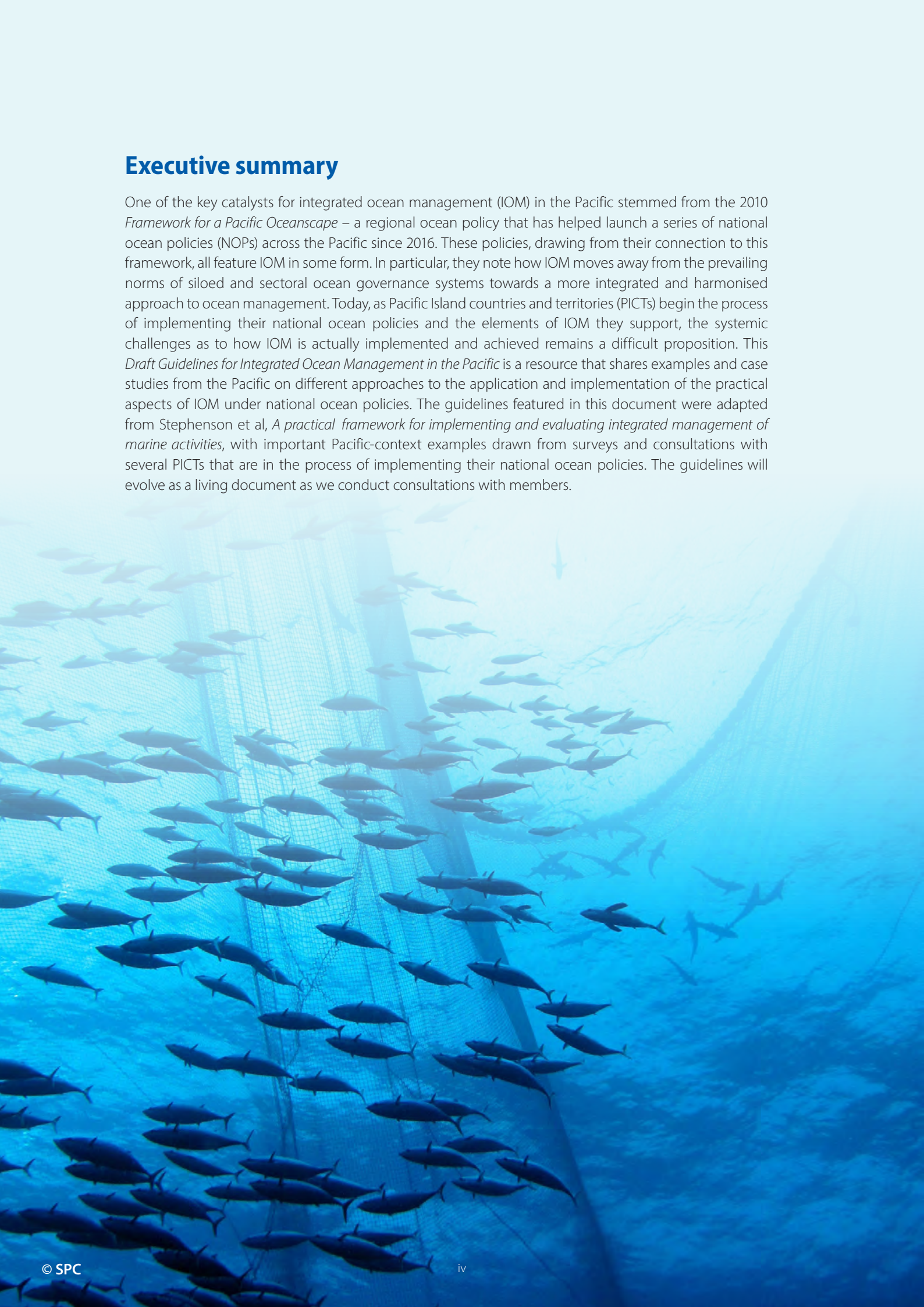
Suva, Fiji, 2024

Cover images: Black durgon triggerfish and aerial view of a nickel mine in New Caledonia. © SPC

Contents

Executive summary

One of the key catalysts for integrated ocean management (IOM) in the Pacific stemmed from the 2010 *Framework for a Pacific Oceanscape* – a regional ocean policy that has helped launch a series of national ocean policies (NOPs) across the Pacific since 2016. These policies, drawing from their connection to this framework, all feature IOM in some form. In particular, they note how IOM moves away from the prevailing norms of siloed and sectoral ocean governance systems towards a more integrated and harmonised approach to ocean management. Today, as Pacific Island countries and territories (PICTs) begin the process of implementing their national ocean policies and the elements of IOM they support, the systemic challenges as to how IOM is actually implemented and achieved remains a difficult proposition. This *Draft Guidelines for Integrated Ocean Management in the Pacific* is a resource that shares examples and case studies from the Pacific on different approaches to the application and implementation of the practical aspects of IOM under national ocean policies. The guidelines featured in this document were adapted from Stephenson et al, *A practical framework for implementing and evaluating integrated management of marine activities*, with important Pacific-context examples drawn from surveys and consultations with several PICTs that are in the process of implementing their national ocean policies. The guidelines will evolve as a living document as we conduct consultations with members.



Introduction

Integrated ocean management (IOM) supports the holistic, ecosystem-based and knowledge-based approach to planning and managing the use of ocean space, with the goal of balancing various uses and needs to achieve a sustainable ocean economy along with healthy ecosystems (Winther et al, 2023).[1] IOM is not a new concept and includes familiar tools such as marine spatial planning, ecosystem-based management, and integrated coastal zone management. In the Pacific, traditional tools for ocean governance have been employed for centuries and it is an integral part of the rich Pacific culture and the connection to the land and ocean. A key feature of IOM is that it moves away from the prevailing norms of siloed and sectoral ocean governance systems and looks instead to a more integrated and harmonised approach to ocean management.

The *Draft Guidelines for integrated ocean management in the Pacific* is a resource that provides examples and case studies from the Pacific on different approaches to the application and implementation of the practical aspects of IOM into policy making and institutional governance, and in particular for national ocean policies. The guidelines were adapted from Stephenson et al, *A practical framework for implementing and evaluating integrated management of marine activities.* Additionally, contextual examples were drawn from surveys and consultations with several PICTs that are in the process of implementing their national ocean policies. These local examples, lessons-learnt and case studies were incorporated into these guidelines.

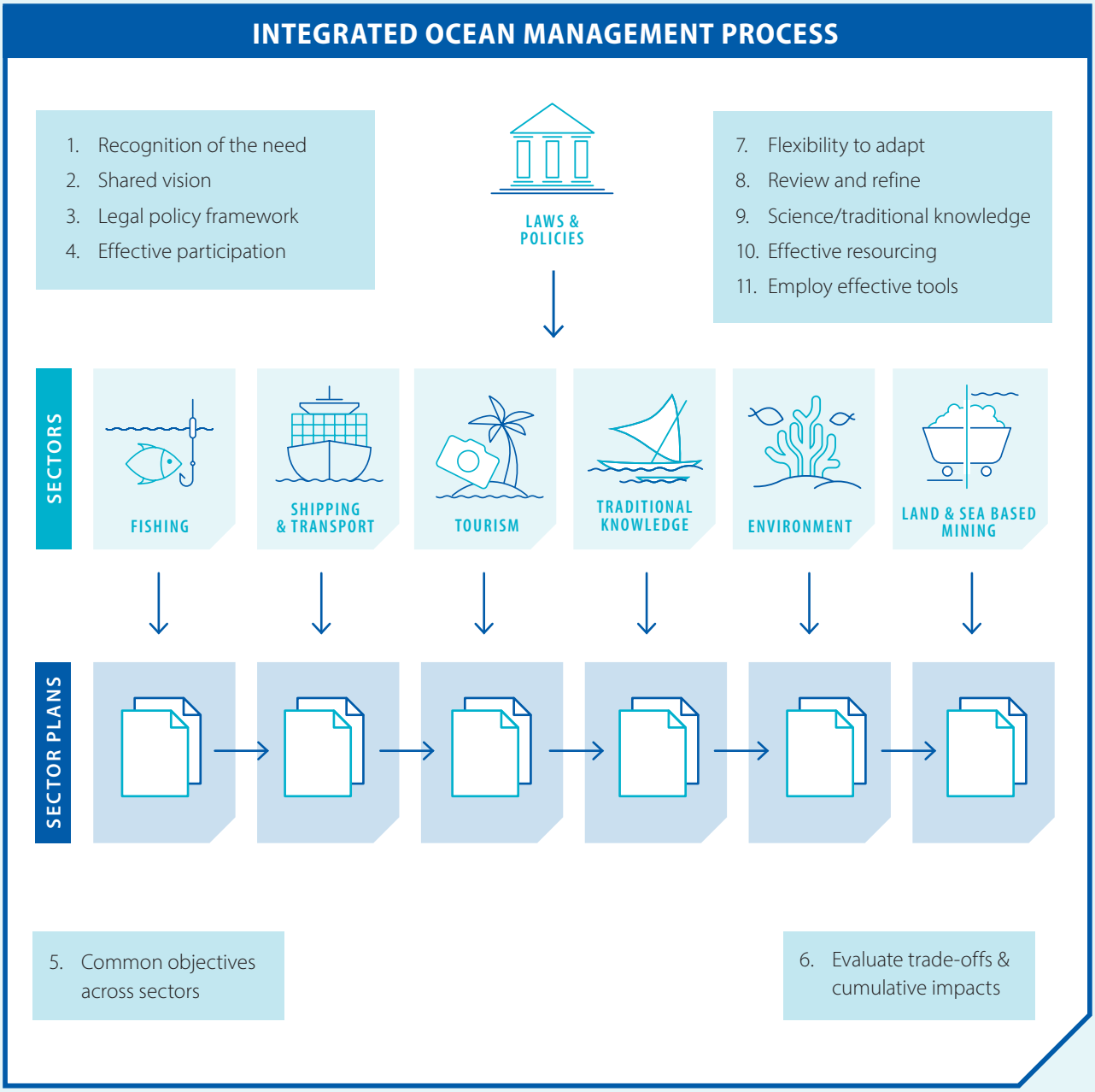
Guidelines

The guidelines below may assist in achieving IOM by connecting and modifying existing sector-based plans in an overarching IOM initiative (Figure 1):

1. Recognise the need for integrated ocean management
2. Build a shared vision by stakeholders and decision-makers for integrated ocean management
3. Develop appropriate and robust legal and institutional frameworks for coordinated decision making
4. Recognise and value the contribution of traditional knowledge, culture and customary practices to ocean management
5. Ensure sufficient and effective processes for stakeholder consultation, engagement and participation
6. Develop a common and comprehensive set of operational objectives
7. Consider trade-offs and cumulative impacts
8. Encourage adaptive management
9. Develop processes for ongoing review and refinement
10. Ensure effective resourcing, capacity, leadership
11. Employ effective tools, including the best available science

1 Winther, J-G., Dai, M., Douvere, F., Fernandes, L., Halpin, P., Hoel, A. H., Juinio-Meñez, M. A., Li, Y., Morrissey, K., Rist, T., Scarano, F. R., Trice, A., Unger, S., & Whitehouse, S. 2023. (Lubchenco, J. & Haugan, P.M., eds). The Blue Compendium: From Knowledge to Action for a Sustainable Ocean Economy. Cham, Switzerland: Springer. pp. 523-552

FIGURE 1: IOM process featuring guidelines for success



Adapted from Stephenson et al, *A practical framework for implementing and evaluating integrated management of marine activities*

1 Recognise the need for integrated ocean management

KEY ELEMENTS:

- Explicit recognition of the need for IOM among key stakeholders.
- Ongoing support from government and management bodies.
- Diverse stakeholders in the IOM process.
- Coordinated management to reduce conflicts between sectors and stakeholders.

An important criteria for the successful adoption of IOM, is a clear articulation for its need amongst various government ministries and offices tasked to implement IOM, as well as relevant stakeholders. This shared understanding of the role of IOM provides a baseline by which the various government ministries and offices serve to implement IOM.

IOM was first mentioned in the 2010, *Framework for a Pacific Oceanscape*, a regional ocean policy, before subsequently appearing in national ocean policies across the Pacific. The framework notes that at the time "little progress had been made in respect of embracing an integrated approach to ocean governance, with no Pacific Island country considering development of a national ocean policy and no national institutions or agencies dedicated to coordinating ocean affairs."[2] The framework highlights IOM in its objectives, "Integrated ocean management – to focus on integrated ocean management at all scales that results in the sustainable development, management and conservation of our island, coastal and ocean services that responds to PICTs development aspirations and, ensuring and maintaining environmental health and ecological function." The framework also includes clear action items for integrated ocean and coastal management.

The framework's references are significant because it was in many ways the catalyst for the subsequent increase of national ocean policies (NOPs) across the region. The following six policies all accordingly reference integrated ocean management:

- *Cook Islands' Marae Moana Policy 2016–2020*
- *Republic of Fiji National Ocean Policy 2020–2030*
- *National Oceans Policy of Papua New Guinea 2020–2030*
- *Samoa Ocean Strategy 2020–2030*
- *Solomon Islands National Ocean Policy and*
- *Vanuatu's National Ocean Policy*

While references to IOM exist in the framework and Pacific Island NOPs, the level of its application may not bridge across the immediately relevant ministries. Discussions with regional experts have revealed that NOPs often do not have sufficient weight to engage ministries beyond the lead agency, office, or ministry. There is often a gap among different ministries in fully appreciating all aspects of NOPs, not the least of which being IOM which is a more complicated element to implement.

In some of the case study sites, NOP managers indicated that there was a lack of political will to support ocean agencies newly empowered by a NOP, as well as tensions between various ministries, for example between ministries of foreign affairs, fisheries, or environment. The IOM articulation in NOPs need to transcend beyond the NOP and relate directly to mandates of other clearly relevant ministries or agencies to fully empower them to engage with the relevant agency responsible for the NOP. Furthermore, the lack of legislative provisions to empower NOPs also led to delays in implementation as certain legal obligations and mandates remained unchanged.

2 Pratt, C., Govan, H., 2010 Framework for a Pacific Oceanscape: A catalyst for implementation of ocean policy (24 pp).

The various NOPs across the Pacific have demonstrated different responses to conflicts arising from NOP-related coordination. In some cases, there are institutional structures or mechanisms to address conflict, which has led to resolution. However, in cases where there is no such mechanism in place, there is no clear way forward to resolving the conflicts. This demonstrates the need for a coordinated management mechanism to address such conflicts to ensure that the NOPs are achieving their expected outcomes. Coordinated management mechanisms provide a template for a forum to raise and address conflicts. This governance model is particularly useful as it includes representatives from across government ministries and can address the conflicts that arise from overlapping mandates.

Checklist:

- Is there explicit recognition of the need for integrated ocean management among key stakeholders, including government, management agencies, relevant industry sectors, dependent communities, and non-governmental organisations?
- Is there ongoing support from government and management bodies?
- Where there has been conflict within or between sectors, was there appetite for coordinated management to resolve the conflict?
- Do institutional processes include diverse stakeholders in participatory management?

2 Build a shared vision by stakeholders and decision-makers

KEY ELEMENTS:

- Establishing a common vision for IOM.
- Clarifying how IOM relates to existing management activities and how it addresses deficiencies or gaps.

A key feature of IOM is breaking down sectoral siloes and having a unified vision across government, including across ministries and other stakeholders. In the cases where there has been robust consultation in developing policies or goals featuring IOM, achieving this may have occurred through that process. However, with top down approaches to developing NOPs there may be a need to establish a shared vision for IOM.

CASE STUDY

A shared vision in developing the *Solomon Islands National Ocean Policy*

Solomon Islands, in developing its NOP, was in many ways successful in its participatory and consultative approach. The development of the policy was initiated by Prime Minister Sogavare. Officers from 12 national ministries formed a working group, dubbed Ocean12, with the task of developing the policy. Ocean12 built on existing policies and sectoral priorities, including those of fisheries, environment, and development planning. Their aim was to make an 'integrated effort, not one of competing silos'.[3] Furthermore, consultations with NGOs, the private sector, and provincial and local governments occurred in the early stages of this process and provided an opportunity for stakeholder consultation and engagement.

3 Keen and Msau, 2019, The Blue Pacific in Action: Solomon Islands National Ocean Policy.

One clear point drawn from the NOPs of the Pacific are that they serve as a way to improve collaboration and cross institutional alignment and coordination. There is less clarity on how IOM relates to existing management activities, or how it addresses deficiencies or gaps in current management. For example, in Papua New Guinea's NOP, it states that the "Primary purpose of the NOP is to develop and establish an IOM system within PNG's national jurisdiction…" The NOP does not articulate how this is to be done but suggests that it is the tool to advance IOM. This provides an opportunity for subsequent planning, management, legal and policy tools to establish an IOM system.

The NOPs often do provide a clearly defined and shared purpose for different sectors or stakeholders as it pertains to IOM but there is often a gap when it comes to ensuring that management actions are appropriately targeted. Where governance models include a cross-sectoral group such as the Solomon Islands NOP Ocean12, this often can be addressed because there is representation from the key ministries or agencies. However, for NOPs that lack such a cross-sectoral group there may often be confusion and a lack of trust among IOM participants. This can be remedied by developing these types of governance models to build a shared vision and jointly implement IOM.

Checklist:

- Has a common and clearly articulated vision (and associated objectives) for IOM been established among sectors and decision-makers?
- Is it clear how IOM relates to existing management activities, and how it addresses deficiencies or gaps in current management?
- Is there a clearly defined and shared purpose that makes it easier for different sectors or stakeholders to ensure management actions are appropriately targeted?

3 Develop appropriate and robust legal and institutional frameworks for coordinated decision-making

KEY ELEMENTS:

- Legislative and policy frameworks and coordination among relevant management ministries and agencies to achieve IOM.
- Appropriate institutional arrangements.

Coordinated decision-making requires the appropriate legislative and policy frameworks. These could include ocean management legislation and national ocean policies. Coordination among relevant management ministries and agencies is equally important. NOPs can provide a platform for this coordination among relevant management agencies by articulating governance structures for coordination. The approach this takes varies across PICTs. Some PICTs have opted for a national ocean policy, others have either legislated ocean and other related laws, while several PICTs who have yet to establish national ocean policies are planning to develop national ocean policies or updating existing policies.

Appropriate institutional arrangement is one of the key challenges facing the implementation of IOM. In harmonising cross-sectoral management and institutions, how the institutional framework is set up to how it operates, is an important feature of successful IOM. Institutional arrangements may also suffer from the lack of enabling policies and legislation. In one NOP site, country managers cited that there was a lack of enabling legislation to amend mandates for other ministries, which prevented them from actively engaging with the NOP and subsequently stalling IOM implementation. The complexity, fragmentation,

duplication, and in some cases, conflict, between competing policy objectives and legal mandates that pervade current approaches to marine management make IOM difficult, but through the development of appropriate legal and institutional frameworks, some of this can be addressed.

CASE STUDY

NOP governance: Fiji, Cook Islands and Samoa

Fiji's NOP is managed and administered by the Climate Change Division that sits within the Ministry of Environment and Climate Change. The oversight responsibilities with regards to ensuring the general support of the NOP and advice on policy reform processes rests with the National Ocean Policy Steering Committee (NOPSC) (Figure 2). The NOPSC serves in an advisory capacity with the final authority being the Minister responsible. Fiji's *Climate Change Act 2021,* bolsters the Fiji NOP by legislating its mandate, with the objectives of the Act stated to "provide for the development, implementation and review of …the National Ocean Policy."[4]

The Cook Islands approach to developing a corresponding legislation, the *Marae Moana Act 2017,* to their NOP, the *Marae Moana Policy 2016–2020,* helps strengthen governance because it provides clear and legally binding mandates and authority for its government to carry out the functions of both Act and the evolving NOP. The *Marae Moana Act,* for example, provides a legally mandated pathway "to secure national and international sources of finance to support the purposes of this Act."[5] Legally mandated provisions like this can help accelerate funding to support the implementation of ocean laws and policies.

The Samoa NOPSC was established to provide an advisory role and decision-making related to the coordination and implementation of the *Samoa Ocean Strategy.* Members of Samoa's NOPSC include eight ministries and offices. The NOPSC is also supported by two working groups composed of technical officials of ministries, and inter-governmental and non-governmental agencies approved by the NOPSC (Figure 3).

National laws, policies and institutional architecture for ocean management varies across the Pacific Islands but there is an increased level of coherence because of sustained regional engagement. Also, regional drivers for change such as the Framework for a Pacific Oceanscape, Council of Regional Organisations of the Pacific (CROP) engagement and the annual Pacific Islands Forum Leaders Communiques, which assist in aligning the region on key ocean issues and agendas.

Checklist:

- Are there legislative and policy frameworks in place among relevant management ministries and agencies to achieve IOM?
- Are there appropriate institutional arrangements to support IOM, for example, a cross ministerial agency?

4 §4(g), Climate Change Act 2021
5 §15(j), Marae Moana Act 2017

FIGURE 2: Fiji NOP governance structure (source: Fiji National Ocean Policy)

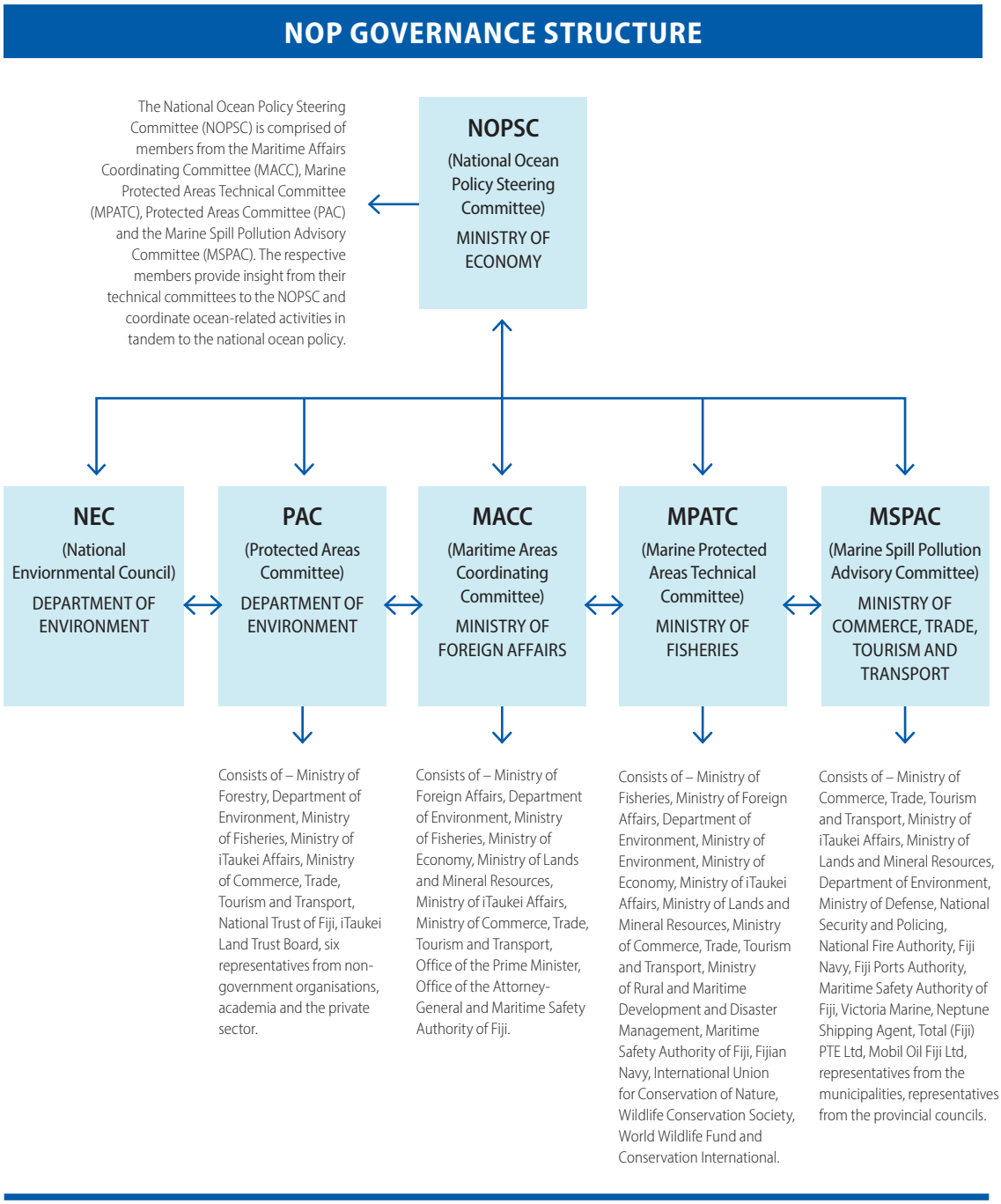
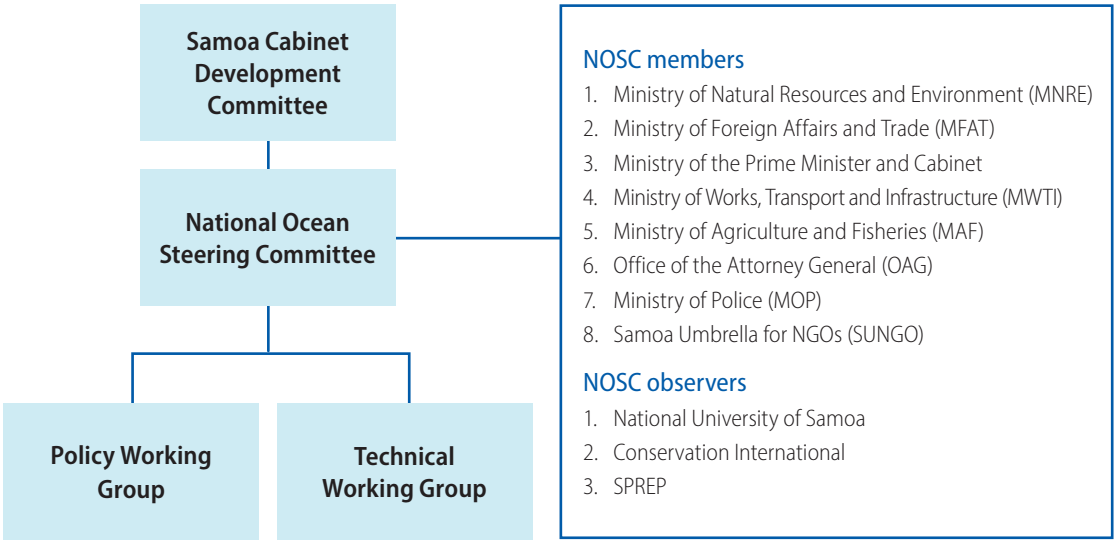


FIGURE 3: Structure of the Samoa NOPSC (source: Samoa Ocean Strategy)



4 Recognise and value the contribution of traditional knowledge, culture and customary practices

KEY ELEMENTS:

- Recognition and appreciation of traditional knowledge, culture, spirituality and customary practices in ocean management.

The ocean holds immense cultural significance for Pacific Islanders. It is not just a physical entity but is often considered alive and breathing, reflecting a spiritual connection with the environment. The recognition and appreciation of traditional knowledge, culture, spirituality and customary practices in ocean management is crucial for many reasons, particularly in the context of Pacific Islanders and their deep connection with the ocean.

The various NOPs across the Pacific all feature a strong element of cultural heritage or traditional knowledge. The Fiji NOP for example, notes that the Pacific Ocean is central to the Fijian culture and highlights the long history of customary marine management practices, such as the temporary closing off of fishing areas after the death of a chief. These practices have contributed to the development of the Fiji Locally Managed Marine Area network which has adopted this traditional tool of management and merged it with science and research in many of its traditionally managed inshore areas. This approach recognises that the power of this community-based tool is based on people's traditional rights to set rules on the uses of the coastal areas (*qoliqoli*).

In Cook Islands, a key policy objective of the *Marae Moana Policy* is to protect maritime cultural heritage. To address this, the policy aims to ensure that sustainable Cook Islands traditional marine management practices are recognised as both a cultural practice and environmental management tool; and that the roles of traditional leadership, traditional and local ecological knowledge, customs and practices and best available scientific data will be respected, recognised and supported in any new management arrangements.

Traditional knowledge emphasises the interconnectedness of islands through the ocean. People identify relationships with other islands, recognising the sea as a unifying force that links communities and fosters a sense of shared heritage. This interconnectedness has practical implications for activities such as trade, communication and the sharing of resources, reflecting the reliance on the ocean for sustaining communities. Vanuatu's NOP acknowledges a long tradition of connection with and management of the sea and its resources and features are a key pillar of the NOP, Vanuatu's ocean culture. This connection is evidenced from the historical use of shells as currency by the people of Vanuatu. Shells could be used in part or whole and woven into different shapes. The ni-Vanuatu also used shells, urchin arms and turtle shell for body ornamentation; conch shells to call people together; augur shells (Terebridae) as spearheads; the hard, sharp edges of the turtle limpet as a tool in cooking; coral rock to pound kava; and people regularly travelled between islands in canoes. These voyages were a traditional part of life and allowed for inter-island trading for both socioeconomic and ritual purposes.

Pacific Islanders continue to maintain their connection with the ocean through the use of totems and customary practices. These practices often involve rituals, ceremonies and symbolic representations that reinforce the relationship between communities and the marine environment. Totems may serve as symbols of protection or guidance, reflecting a holistic approach to ocean management that integrates spiritual beliefs with practical conservation measures.

Traditional knowledge is invaluable in navigating the sea and understanding the local marine ecosystem. Indigenous navigation techniques, such as wayfinding, have been passed down through generations, enabling Pacific Islanders to traverse the vast ocean with a deep understanding of natural signs and patterns. The Constitution of the Federated States of Micronesia highlights this rich Pacific voyaging history and in its preamble states that "Micronesia began in the days when man explored seas in rafts and canoes. The Micronesian nation is born in an age when men voyage among stars; our world itself is an island."[6]

In the face of climate change-related challenges, such as sea-level rise and extreme weather events, traditional knowledge equips communities with the tools to identify and respond to these threats in ways that are adapted to their specific local contexts.

Pacific Islanders rely on traditional knowledge to adapt to changing environmental conditions. This includes anticipating shifts in weather patterns, understanding the behaviour of marine species, and implementing sustainable practices that promote resilience in the face of climate change. A recent Pacific initiative to harness traditional knowledge to better understand forecast products. In this initiative traditional knowledge is key in disseminating weather information to the communities so that people better understand weather warnings better. Root crops, such as yams; plants; and animal behaviour are a few of the examples to also help with decision-making, climate risk management and disaster prevention.[7] By incorporating traditional knowledge into modern approaches to ocean management, Pacific Islanders can enhance their ability to mitigate and adapt to the impacts of climate change.

Recognising and valuing traditional knowledge, culture, and customary practices are essential for Pacific Islanders in sustaining their unique relationship with the ocean. Integrating these elements into contemporary ocean management strategies can lead to more holistic and culturally sensitive approaches that promote environmental conservation and community well-being.

Checklist:

- Is there a recognition and appreciation of traditional knowledge, culture, spirituality and customary practices in ocean management across government?
- Are there examples of the effective implementation of traditional knowledge in ocean management?

6 Preamble, The Constitution of the Federated States of Micronesia
7 SPC, Traditional knowledge and the ocean – focus of the 2024 tide prediction calendars

5 Ensure sufficient and effective processes for stakeholder consultation, engagement and participation

KEY ELEMENT:

- Participatory and inclusive governance process that include all relevant stakeholders and sectors.

For IOM governance to be successful it is important that the process is participatory and includes all relevant sectors and stakeholders. With NOPs in the Pacific, different approaches have been taken with respect to stakeholder engagement and participation.

The Cook Islands *Marae Moana Act*, being one of the few Pacific Island states with a corresponding legislative accompaniment to its NOP, highlights the principle of community participation noting that: "all stakeholders should participate in the planning and implementation processes, which means that information exchange, consultation, respect for differing points of view, recognition of culture and traditions, equitable access to opportunities for present and future generations, easily understood and openly justified processes, and the shared ownership of responsibility should be promoted and encouraged in the decision-making processes of the marae moana."[8] The *Marae Moana Act*, explicitly lays out the need for broad consultation through the planning and implementation phases, and importantly highlights the recognition of culture and traditions.

In the development of the *Solomon Islands National Ocean Policy*, the Solomon Islands government established Ocean12, a national steering committee comprised of the Permanent Secretaries from 12 government ministries,[9] to guide the development of their NOP. Ocean12 subsequently established a technical working group composed of technical officers from the same ministries. In the development of the NOP, Ocean12 built on existing policies and sectoral priorities, with early consultations with NGOs, the private sector and provincial and local governments.[10]

Following the launch of the *Samoa Ocean Strategy*, and in line with it, Samoa began a national marine spatial planning process in an effort to strengthen community engagement and to solicit feedback and gather information for the development of a spatial ocean plan. The Samoan marine spatial plan consultations included 45 consultation workshops across 185 coastal village communities and four key sectors, including tourism, fisheries, government ministries and organisations and NGOs and civil society organisations.[11] The consultation process provided an opportunity for community members and stakeholder groups to voice their perspectives on ocean use and opportunities for government intervention. This provides key insights for policy makers and their management measures. For example, during the consultations, 69% of community groups indicated that climate change was the greatest environmental challenge impacting the sustainability of the ocean and its natural resources. Additionally, unsustainable fishing practices and its adverse impacts on the sustainability of marine resources, including damaging marine environments and affecting livelihoods, were highlighted by 45% of community stakeholders and the majority of sectoral stakeholders.

8 Marae Moana Act 2017.
9 Ocean12 is comprised of the Permanent Secretaries from the Ministries of Fisheries and Marine Resources; of Environment, Climate Change, Disaster Management & Meteorology, of Foreign Affairs and External Trade and the Office of the Prime Minister and Cabinet, Ministries of Mines, Energy and Rural Electrification, of Lands, Housing and Survey, of Culture and Tourism, of Development Planning and Aid Coordination, of Infrastructure Development (Solomon Islands Maritime Safety Authority), of Justice and Legal Affairs, of Police, National Security & Correctional Services, of Forestry & Research and of Provincial Government and Institutional Strengthening.
10 Keen and Msau, 2019, The Blue Pacific in Action: Solomon Islands National Ocean Policy.
11 Mulipola A.P, Strickland D, Satoa M. Iene F and Selu F (2022) Marine Spatial Planning First Phase National Consultations Report. IUCN, Suva.

Stakeholders should include those who have the authority to support and accomplish the unique features of IOM, including government, management agencies, industry bodies, communities and scientists. This is particularly relevant as it feeds into decision-making and the implementation of NOP. In the development of marine protected areas for example, the involvement of cross-sectoral agencies from fisheries, environment, lands, NGOs, fishers and local communities are essential.

In the Pacific the role of broad consultations in particular with communities is very important given the intrinsic connection many Pacific people have to their natural environment. All NOPs in the Pacific feature some level of community consultation. This can be seen in both, marine spatial planning and NOP planning and implementation processes.

Checklist:

- Is the IOM governance process participatory and does it include all relevant sectors and stakeholders?
- Do stakeholders include those who have the authority to support and accomplish the unique features of IOM, including government, management agencies, industry bodies, relevant communities and scientists?
- Is there a need for procedural safeguards to offset imbalances in the power of particular groups or individuals, to ensure that processes are substantively fair and equitable?

6 Develop a common and comprehensive set of operational objectives

KEY ELEMENTS:

- A comprehensive set of objectives representing shared ecological, social, cultural and economic values that shape the management of all activities.
- Articulated operational aspects of aspirational or general objectives for a specific region or area.

One of the major benefits of IOM is a comprehensive set of objectives representing shared ecological, social, cultural and economic values that shape the management of all activities. These include elements such as equitable access, distribution of benefits and community well-being, that comprise sustainability and often go beyond individual activities. These exist in some of the current Pacific NOPs (Table 1).

TABLE 1: The objectives from the NOPs of Papua New Guinea, Solomon Islands and Vanuatu.

National Oceans Policy of Papua New Guinea	*Solomon Islands National Ocean Policy*	*Vanuatu's National Ocean Policy*
Strengthen the implementation of UNCLOS [United Nations Convention on Law of the Sea] and the MZA [Maritime Zones Act 2015], through mutual cooperation and collaboration with international, regional and domestic partners and stakeholders; Support the implementation of the Fourth Goal of the National Constitution relating to the wise use and management of PNG's environment and natural resources; Strengthen cooperation and collaboration between different stakeholders in the implementation of the NOP; Support the implementation of overarching national policies namely, the Papua New Guinea Vision 2050 and the National Strategy for Responsible Sustainable Development for Papua New Guinea (STaRS); Provide strategic direction upon which sub-policies dealing with the ocean space can be standardised to enable a coherent integrated management system; and Facilitate capacity building, the transfer of marine technology, and ocean literacy, and promote tools and approaches that transform ocean knowledge into actions on ocean sustainability.	Achieve sustainable use and development of the ocean and its resources through integrated ocean governance; Recognise the importance and value of the Solomon Islands' ocean and its resources as a basis for social, cultural, economic and environmental aspirations for all Solomon Islanders; Strengthen integration, coordination and harmonisation of efforts by communities, provincial and national government, and across all sectors; Uphold our national and international ocean commitments and obligations; Recognise and address competing ocean values and uses by different sectors and stakeholders; Ensure sustainable food and nutritional security and maximise economic benefits for the people of Solomon Islands; and Protect Solomon Islands' interests over and the peaceful use of its ocean.	Secure rights to marine resources; Reform ocean governance; Preserve and protect the marine environment; Promote sustainable economic development; Promote public awareness, participation and accountability; Increase knowledge and capacity building; and Build resilience and managing for uncertainty.

The above objectives provide a platform for the implementation and management of ocean activities. It also provides the basis for monitoring the impact of ocean policies and whether they are achieving their stated objectives.

An IOM process should articulate operational aspects of aspirational or general objectives for a specific region or area. IOM must also meet administrative objectives related to good governance and effective decision-making. To achieve this outcome IOM structures must work across regulatory authorities and sectors/activities. It should influence all managed activities towards the use of a common set of objectives that represent the diverse set of governance aspirations set out in laws, policies and international agreements.

There should be inter-sectoral policy coherence. Objectives should be agreed upon, achievable and measurable. The use of common objectives also facilitates the evaluation of cumulative impacts across sectors and ocean-related activities.

Checklist:

- Does the IOM process influence the broader set of objectives representing shared ecological, social, cultural and economic values that shape the management of all activities?
- Does the IOM process articulate operational aspects of aspirational or general objectives?
- Do IOM institutional structures work across regulatory authorities and sectors/activities?
- Do managed activities work towards the use of a common set of objectives that represent the diverse set of governance aspirations set out in the relevant laws and policies?

7 Consider trade-offs and cumulative impacts

KEY ELEMENTS:

- Evaluating trade-offs between ocean management objectives and among activities in management decision-making, and the cumulative impacts of multiple activities.

In moving towards an IOM approach, a broader set of sectors, objectives and activities are being considered. Inherent in the implementation of shared objectives is the need to consider trade-offs between objectives and among activities in decision-making, and the cumulative impacts of multiple activities. These could be a possible contradiction of objectives from different sectors, for example, coastal development or industrial fishing activities and community conservation efforts. These are two of the major deficiencies of current single sector-based management that could be addressed by an IOM process.

IOM must therefore provide a mechanism for evaluating trade-offs among ecological, social, cultural and economic objectives and activities, at multiple temporal, spatial and governance scales, and for considering cumulative impacts of multiple activities against common objectives.

Marine spatial planning work in the Pacific provides a consideration of trade-off and cumulative impacts. The work aims at managing competing needs in a defined space. Competing users are identified as part of marine spatial planning design with planners identifying major trade-offs among competing, current and potential activities, and decide which allocation of resources is aligned to the objectives.[12] Expanding, marine protected areas to protect ecologically valuable marine space might make sense from an ecosystem perspective, but would prevent opportunities for commercial fishers, transportation and industry.

12 World Bank. 2022. Applying Economic Analysis to Marine Spatial Planning

For example, in Samoa's Marine Spatial Planning (MSP) consultations, communities highlighted a range of competing ocean uses and potential solutions. A key concern for certain village groups was sand mining. It was identified as a major contributor to high siltation and turbidity, leading to the loss of bivalves, molluscs, and other coastal marine species. Villagers pointed to large-scale commercial sand mining as a significant driver of habitat degradation. Additionally, coastal development activities were cited as having adverse impacts on inshore marine life and habitats. To address these issues, villages recommended implementing an effective permit system to control sand mining. They also proposed local and national mitigation solutions, alongside monitoring, to regulate coastal development and prevent further shoreline erosion. Overall, the consultations provided a platform for communities to discuss various ocean use activities, identify trade-offs, and propose solutions.[13]

The broader fisheries sector in the Pacific is another example where cumulative impacts of different activities are affecting one of the key resources for the region – tuna. There are several tuna-dependent PICTs in the Pacific, where tuna access fees provide 4–84% of government revenues.[14] However, models show that climate change will drive redistribution of tuna in the coming years outside the EEZs of many of these tuna-dependent PICTs and affect both tuna stocks and related revenue.[15] Another human driven-impact affecting tuna in the Pacific is illegal, unreported and unregulated (IUU) fishing. A 2021 published study demonstrated that the "total annual volume of tuna either harvested or transshipped involving IUU activity in Pacific tuna fisheries during the 2017–2019 period was 192,186t."[16] With a corresponding value amounting to approximately USD 333 million. Beyond this, IUU fishing also affects the resources available for local markets and consumption. Between climate change and IUU fishing, as well as the value of access fees that governments issue to industrial fishing fleets, the cumulative impact of this to the Pacific tuna industry is profound. However, regional fisheries management organisations, technical agencies like the Forum Fisheries Agency (FFA), together with PICTs, help manage these cumulative effects and corresponding management measures. Some of the complicated issues like climate change driven redistribution of tuna are still being studied, with FFA's Climate Change Strategy providing a platform for the region to engage on this issue.

Checklist:

- Are the trade-offs between objectives and among activities in management decision-making, and the cumulative impacts of multiple activities being considered?

13 Mulipola A.P, Strickland D, Satoa M. Iene F and Selu F (2022) Marine Spatial Planning First Phase National Consultations Report. IUCN, Suva.

14 Bell, J.D., Senina, I., Adams, T. et al. Pathways to sustaining tuna-dependent Pacific Island economies during climate change. Nat Sustain 4, 900–910 (2021). https://doi.org/10.1038/s41893-021-00745-z.

15 Ibid. 9

16 MRAG Asia Pacific (2021). The Quantification of Illegal, Unreported and Unregulated (IUU) Fishing in the Pacific Islands Region – a 2020 Update.

8 Encourage adaptive managements

KEY ELEMENTS:

- Adaptable and flexible IOM processes that are able to respond to changing ecosystem and governance conditions.

A key attribute of IOM is the ability to manage multiple activities in highly dynamic marine ecosystems. The processes that guide effective IOM must therefore be adaptable to changing ecosystem and governance conditions.

In Fiji's NOP, adaptive management is cited as an overarching principle, where "decisions will be updated as we learn more about patterns and impacts of ocean uses, particularly as environmental, social, and economic conditions change."

Some aspects of IOM depart from existing governance arrangements, and so should be guided by concepts of institutional change. However, the need for flexibility can be achieved by embedding IOM in the principles of adaptive management that already underlie many natural resource management approaches.

CASE STUDY:

Palau National Marine Sanctuary

In Palau, a traditional method of conservation, called *bul*, has been used for centuries. This practice involves "placing reef areas off limits to fishing during known fish spawning and feeding periods."[17] In 2015, Palau enacted the *Palau National Marine Sanctuary Act*, that would eventually lead to the creation of a national bul, or marine protected area, that covered approximately 80% of its EEZ. In 2019, in response to stakeholder feedback, the Palau government reoriented the Palau National Marine Sanctuary (PNMS) and shifted the domestic fishing zone from the eastern part of the EEZ to the west, providing easier access for domestic fishing vessels as well to better aid fisheries enforcement. The PNMS was seen as a tool to conserve Palau's ocean heritage and increase the sustainable contribution of the ocean to livelihoods and human well-being. In recent years, Palau has been undertaking a marine spatial planning process to better understand the science and impact of the PNMS and how this might guide future management measures and decisions. Palau's PNMS demonstrates its responsiveness to adapt to changing environmental and economic conditions.

Checklist:

- ☑ Are IOM processes flexible and adaptable to respond to changing ecosystem and governance conditions?

17 Micronesian Sea Traditions - Palau's Marine Protected Areas

9 Develop processes for ongoing review and refinement

KEY ELEMENTS:

- Regular evaluations for effectiveness and ability to achieve objectives.
- Established processes for ongoing review and evaluation.

IOM should be evaluated regularly for effectiveness and its ability to achieve stated objectives. This requires an established process for ongoing review, evaluation and refinement, based on the principles of management science. Appropriate indicators that are able to distinguish between different performance levels and expectations must be identified, and there must be risk-appropriate management actions associated with non-compliance.

Several Pacific NOPs currently include monitoring and evaluation in their NOPs, however it is unclear whether IOM features prominently in the monitoring and evaluation. Fiji's NOP provides a process for monitoring, evaluation and learning (MEL). It provides that MEL process will be led and coordinated by the administrator of its NOP, and include a broad array of actors, including custodian entities for the NOP indicators as well as views and inputs from other government agencies, NGOs and community members. Fiji's NOP also states that the MEL will be reported in the annual progress reports and five-year review report.

Solomon Islands' NOP includes language on strengthening and developing new monitoring, evaluation and reporting systems to assess, monitor, track and report on the status of the ocean, including the impacts of land and ocean-based developments and activities. In some cases in the Pacific, the relevant MEL are commitments of the PICT with respect to SDG 14 and their voluntary national review reports for the implementation of the SDGs.

As the Pacific ramps up efforts to implement NOPs, MEL may also see renewed attention and assist in the alignment to overall goals and objectives.

Checklist:

- Are evaluations regularly conducted for the effectiveness and ability to achieve objectives?
- Is there a process for ongoing review and evaluation?

Sea cucumber survey

10 Ensure effective resourcing, capacity, leadership and tools

KEY ELEMENTS:

- Achieving IOM requires:
  - effective finance, resources, capacity, leadership and tools
  - effective science to support policy and decision-makers
  - integrating traditional knowledge into science.

The implementation of effective IOM requires appropriate resourcing, capacity and leadership. While there may be some efficiencies resulting from integration over time, IOM invariably requires an increased level of engagement and communication costs (money, time and skills) associated with engaging and building trust among participants. IOM should be considered an essential addition rather than a replacement of sector-based management, at least in the short term. Resources are also needed for the additional steps of identifying, analysing and responding to cross-sectoral interactions, to ensure they are in line with the integrated vision and shared set of objectives.

Resourcing may often be limited by the enabling legislative and policy environment. While some NOPs are silent on finance for their respective policies, others may lack the proper authority to garner the requisite funding or resources. Those with legislative mandates to appropriate resources may be able to do so for implementation activities. The *Marae Moana Act*, for example, provides that its "Technical Advisory Group must take necessary measures to secure national and international sources of finance to support the purposes of this Act."[18] This legislative provision provides an avenue to acquire funding to support the implementation of the NOP. As has been seen in other cases, national budgets may also be amenable to updates to support the implementation of NOPs.

CASE STUDY:

Niue Moana Mahu

In 2020, Niue legally designated 40% of its EEZ as a no-take marine protected area, known as Niue Moana Mahu, with 100% of its EEZ under a marine spatial management plan.[19] To support these ocean conservation efforts, a public-private partnership between the Government of Niue and a local NGO established the Niue Ocean Wide (NOW) Trust. This was a response to the limitations of the availability of long-term funding. Capitalisation of the NOW Trust Endowment Fund was seen as an opportunity to provide sustainable funding for Niue's conservation and resilient sustainable management and development activities and help build related capabilities over time. One innovative approach in the suite of tools employed by the Now Trust is Ocean Conservation Commitments (OCCs), where it is possible to sponsor or co-fund the Niue Moana Mahu. OCCs can be sponsored for NZD 250 for 1 km^2 for 20 years, and represents the conservation cost, and associated benefits.[20] There are a total of 127,000 OCCs which correspond to the size of the Niue Moana Mahu at 127,000 km^2. Proceeds raised through OCC sponsorships are managed by Niue and the NOW Trust and are used to fund a range of conservation, resilience and sustainable development efforts related to the Niue Moana Mahu.

18 §15(j), Marae Moana Act 2017
19 Niue Ocean Wide, Funding Niue's Ocean Wide Conservation and Resilient, Sustainable Blue Economy.
20 Ibid. 19

CASE STUDY

Traditional leadership in Fiji, Qoliqoli Cokovata

The Qoliqoli Cokovata is a designated Ramsar site in Fiji which encompasses the traditional fishing grounds of the districts of Dreketi, Macuata, Sasa and Mali, and lies along the north shore of the island of Vanua Levu. The traditional owners of the Qoliqoli Cokovata, led by the Tui Macuata and the people of Macuata, Sasa, Dreketi and Mali worked together with the Fiji Government and WWF to designate this as a Ramsar site. Traditional leadership is an important facet of marine conservation in areas which fall under traditional ownership. In Fiji, customary marine tenure over inshore areas or *qoliqoli* is held solely by iTaukei clans. The *qoliqoli* areas are based on historically recognised customary fishing grounds which are often defined by the outer limits of reef systems.

Like traditional leadership, institutional leadership is also required to support the additional steps needed for integration and engagement. Firm leadership is needed to ensure the longevity of IOM initiatives and the political will to advance its implementation. Institutional commitment across agencies and groups is essential for successful implementation. There have been some clear examples of leadership in the establishment of NOPs, however there is evidence and anecdotes from PICTs that there is a lack of sustained attention and resources to fully realise NOP potential.

General staffing for ocean offices that are mandated to oversee the implementation and coordination of NOPs is also an area that may warrant further examination. These offices are often manned by one or two individuals who are often inundated with a myriad of roles and responsibilities that prevent the effective delivery of objectives (Table 2).

TABLE 2: Number of dedicated staff supporting NOPs in the Pacific

	Samoa	Vanuatu	Fiji	PNG	Cook Islands	Solomon Islands
NOP office	NOSC Secretariat (MNRE)	National Ocean Affairs	Oceans Office under OPM	Office of Oceans Affairs	Marae Moana Coordination Office	Oceans Desk
Number of permanent staff	4	2	1	2	1	2

Checklist:

- Is there additional capacity and financial resources for IOM?
- Is there institutional leadership of IOM, across different sectors (oceans, fisheries, environment, etc.)?
- Are key people empowered to make decisions?

11 Effective tools, including the best available science

PICTs are blessed with a wealth of ocean resources, however large maritime jurisdictions with conversely low levels of resources and science make science-based decision-making difficult. With the holistic, multi-sectoral and cumulative nature of IOM, there needs to be a corresponding level of science and data to guide decision-making. For example, designing a management plan for a reef system will require an understanding of the state of the reef systems, including scientific data, the stakeholders, stressors affecting the reef, how these all interact and the cumulative impact of the users and stressors on the ecosystem. This undertaking can be an onerous one for a government alone but there have been positive examples in the Pacific of joint initiatives featuring multiple government ministries, provincial government, local communities, CROP agencies and civil society organisations working in step to undertake ocean planning and management activities.

Data, science and other processes relevant to policymaking include: marine spatial planning, ecosystem-based management, traditional and local knowledge, ocean observation and prediction, ocean accounting as well as many others.

Marine spatial planning in the region has been a key tool for mobilising NOP implementation and has also led to corresponding amounts of scientific expeditions and research to better understand the marine environments of various PICTs and how this leads to policy objectives. For example, articulating potential locations for the designation of marine protected areas or other management measures.

Ecosystem-based management explores the connectivity between and within ecosystems and the consequences of human actions on these systems. It encourages the protection and restoration of ecosystems, and integrates biological, socioeconomic and governance perspectives.

The role of traditional and local knowledge in the Pacific is a key part of local ocean management and conservation. For example, customary management systems which existed in the Pacific and continue to exist, albeit not as pervasive today, include no fishing during certain seasons like fish spawning and mating seasons, or after the death of a chief; restrictions on access to certain marine spaces or taboo (*tapu* or *tabu*) areas, and who can consume certain marine resources or what cannot be consumed (totem animals); and strict adherence to customary marine tenure system.[21]

IOM will require new and different forms of information which represents a great challenge from government ministries who may often lack the resources to collect and analyse these types of information. Another key aspect is translating science and ocean data into usable knowledge inputs and products for policy makers. This is an opportunity for Pacific Islands to leverage CROP agencies and civil society organisations who have access to resources, including modern observation, analysis and modelling tools.

Checklist:

- Are there new tools and technology available to assist with IOM?
- How does science factor into decision-making?

21 Kitolelei et al. 2021. Na Vuku Makawa ni Qoli: Indigenous Fishing Knowledge (IFK) in Fiji and the Pacific. Frontiers in Marine Science Sec. Marine Conservation and Sustainability, olume 8 - 2021 | https://doi.org/10.3389/fmars.2021.684303

Conclusion

The *Draft Guidelines for integrated ocean management in the Pacific* was developed to demonstrate examples and case studies from the Pacific on different approaches to the application and implementation of the practical aspects of IOM into policy making and institutional governance, and in particular for national ocean policies. It has been adapted for the Pacific and its context, with examples drawn from surveys and consultations with several PICTs that are in the process of implementing their national ocean policies and engaged in practical tools such as MSP.

In developing and implementing IOM within the Pacific region, these eleven-step processes or guidelines are designed to ensure that IOM is effectively integrated into national ocean policies and that they contribute to sustainable ocean governance.

By adhering to the guidelines, stakeholders can work collaboratively to develop and implement IOM strategies that promote sustainable ocean management and resilience in the face of environmental challenges. These steps will help create a harmonised approach to ocean governance that leverages both modern science and traditional knowledge, ensuring the long-term health and productivity of marine ecosystems in the Pacific.

Ultimately this resource will evolve and be further refined to respond to the practical realities of Pacific Ocean policy development and implementation and respond to additional input and feedback from member PICTs and other partners.

Produced by the Pacific Community (SPC)

Pacific Community
Private Mail Bag, Suva, Fiji
+679 337 0733
spc@spc.int | www.spc.int