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A SUSTAINABLE
OCEAN ECONOMY

Executive Summary

Handbook on Sustainable Ocean Plans

A practitioners' guide

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About the Ocean Panel

Established in 2018, the High Level Panel for a Sustainable Ocean Economy (Ocean Panel) is a unique initiative made up of serving world leaders who are building momentum for a sustainable ocean economy in which effective protection, sustainable production and equitable prosperity go hand in hand. By working collaboratively with a wide array of stakeholders, the Ocean Panel aims to identify bold solutions that bridge ocean health, wealth and equity and accelerate and scale responsive action worldwide.

The handbook summarised here is a step-by-step technical manual to illustrate how to formulate and implement a Sustainable Ocean Plan. It has been commissioned by the Ocean Panel as a contribution to the headline commitment made in 2020 to sustainably manage 100% of the ocean area under national jurisdiction, guided by Sustainable Ocean Plans, by 2025, and in support of other ocean and coastal states joining the commitment to sustainably manage their areas under national jurisdictions by 2030. Note that countries joining the Ocean Panel effort after 2020 may commit to develop and be guided by Sustainable Ocean Plans within five years of joining, with the aim of sustainably managing 100% of the ocean area under national jurisdiction.



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Executive Summary

A Sustainable Ocean Plan (SOP) is a strategic, knowledge-based and participatory framework that a country develops to ensure the sustainable management of 100% of its ocean areas under national jurisdiction. The plan defines a long-term vision for ocean sustainability and provides an actionable road map that aligns climate action and biodiversity conservation with sustainable use and equitable prosperity. The SOP should serve as a comprehensive and holistic "umbrella" framework that unifies all ocean-related policies, governance, tools and mechanisms and helps align ocean policies with international frameworks and best practices.

SOPs can be customised to fit the unique circumstances of each country, emphasising a holistic approach that is co-produced with Indigenous and traditional knowledge (ITK) holders, where applicable. Although context specific, all share nine key attributes outlined in Box 1.

Through this holistic approach, SOPs can tackle ocean management fragmentation, ensure cross-sectoral engagement and integrate the ocean into climate mitigation and biodiversity conservation strategies to help reach international agreements. This approach allows for co-production and coordination, ensuring that diverse but interconnected factors are harmonised in approaches such as MSP. The commitment to sustainably manage 100% of ocean areas under national jurisdiction through SOPs represents a critical shift in ocean governance. This is significant because it seeks to change how we interact with and make decisions about the ocean, aiming to combine environmental sustainability, human well-being and economic benefits by recognising interconnected marine social-ecological systems. It's essential to ensure that marine conservation efforts and economic activities align with broader national development objectives and community welfare. This alignment underscores the necessity of integrated ocean management strategies that equitably bring together various ocean priorities, connections and knowledge systems to understand how to best advance co-benefit approaches. Creating a strong platform for governance can effectively meet the demands of diverse stakeholders and rights holders and deliver the structured governance necessary for substantial investment.

SOPs can produce the following outputs:

- Goal setting that integrates policies for sectors such as fisheries, tourism or maritime transport.
- Establishment of coordination mechanisms for sectoral regulations.
- Area-based management aligned with the policies.
- Economic measures and enabling mechanisms for the transformation to sustainability.
- Sectoral policies and regulations consistent with the overall plan.

BOX 1. The nine attributes of a Sustainable Ocean Plan

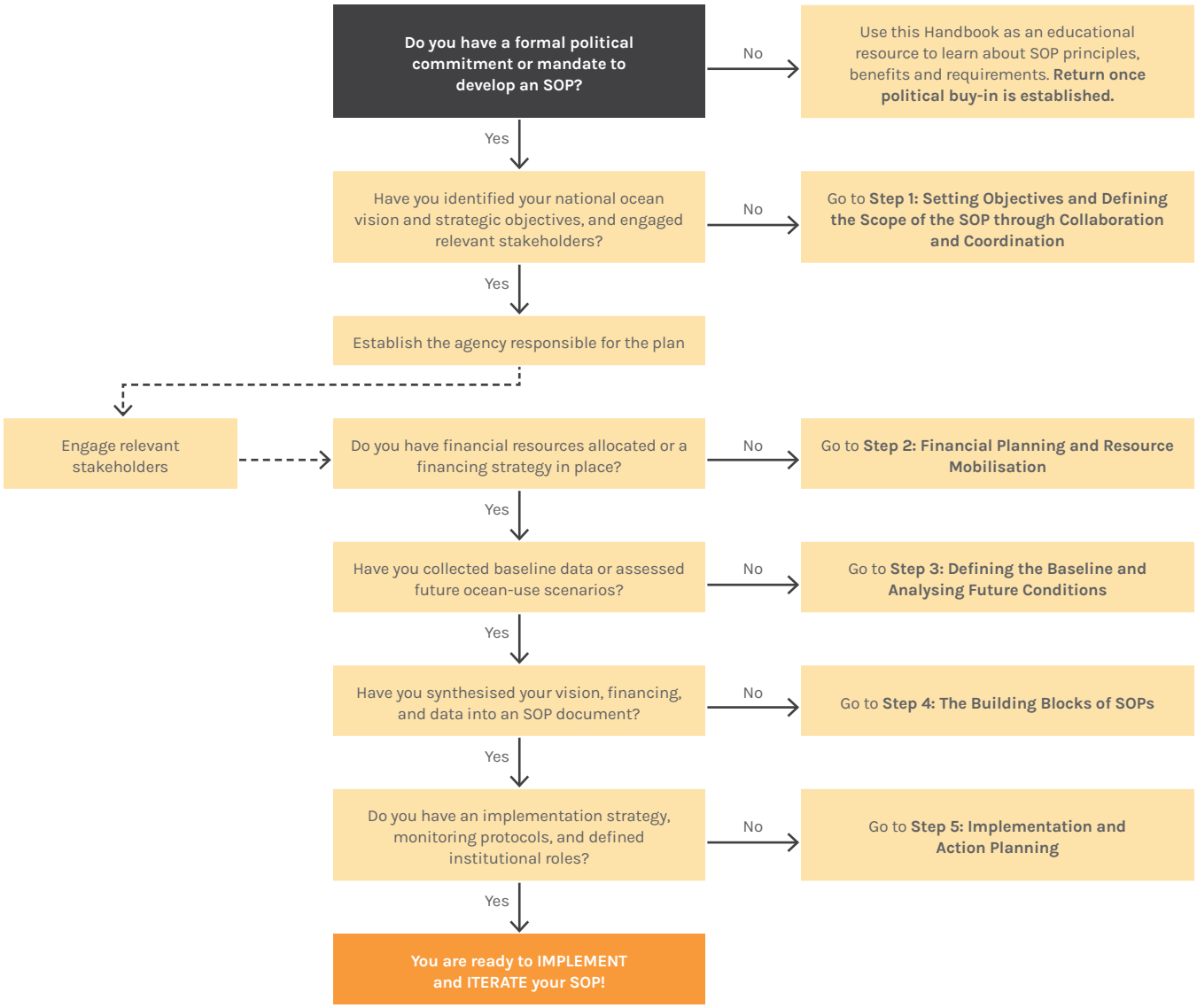
1. **Inclusive:** Sustainable Ocean Plans (SOPs) should include all relevant stakeholders and rights holders in the planning process to ensure diverse perspectives are considered.
2. **Integrative:** Coordination is required between different government agencies (both Indigenous and state) and ocean sectors to ensure a unified approach.
3. **Iterative:** Plans must be adaptable, allowing for updates as new information becomes available or as conditions change.
4. **Place-based:** SOPs should be tailored to the specific marine and coastal environments they are designed to manage, including place-based cultural values.
5. **Ecosystem-based:** Management decisions should recognise and incorporate the complex interactions within marine ecosystems.
6. **Knowledge-based:** Plans should be underpinned by the best available scientific, Indigenous, traditional and local knowledge.
7. **Endorsed:** High-level political endorsement is necessary to ensure the plans are effectively supported and implemented. This should be from both state and Indigenous governments when relevant to the country context.
8. **Financed:** adequate funding must be secured, through public and private sources, to support the long-term implementation of the plans, including support to build and share capacity.
9. **Capacitated:** There must be sufficient capacity — and support to build and enhance existing capacity — in terms of skills, knowledge and resources to effectively develop and implement the plans.

Source: 100% Sustainable Ocean Management: An Introduction to Sustainable Ocean Plans, High Level Panel for a Sustainable Ocean Economy, 2021

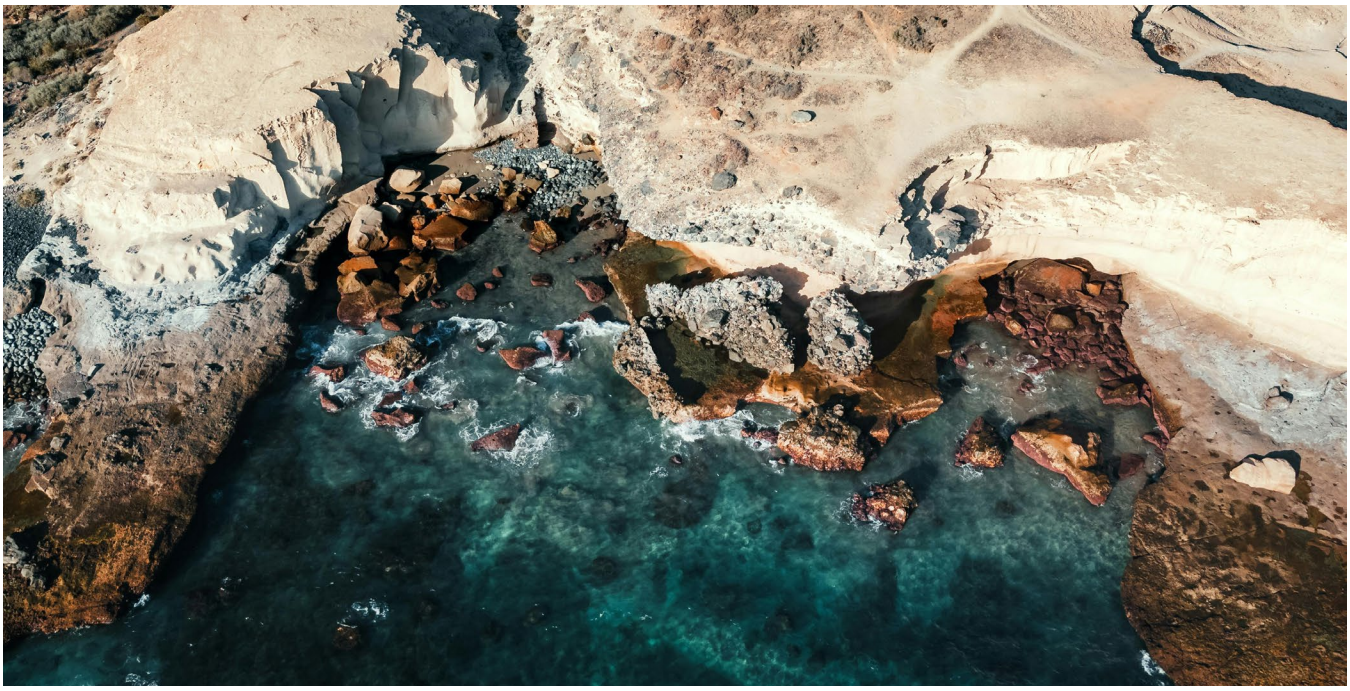
For further information on the attributes and components of SOPs, the SOP outputs, and information on why SOPs are necessary, see the full Handbook section "Introduction to Sustainable Ocean Plans: overview and importance." For exploration on how SOPs contribute to climate mitigation and adaptation see Appendix A. Appendix B provides practical insights for incorporating climate strategies into ocean governance. Appendix C addresses how SOPs contribute towards SDG 14.

A political commitment to sustainable ocean planning at the highest level of government is the point of departure for this handbook. The handbook provides guidance to practitioners on how to support and transform political goals into practical implementation while respecting the different cultural, social, economic and environmental conditions in each country. This handbook is designed to provide practitioners with a step-by-step guide as a "self-assessment" approach to developing and implementing an SOP (as outlined in Figure 1). By following this handbook, practitioners can design, implement and scale effective SOPs that balance ecological integrity with socio-economic development, ensuring a resilient and sustainable ocean future for all.

FIGURE 1. **Decision Tree for self-assessment approach to the Handbook**



Source: WRI authors.



Step 1: Setting objectives and defining the scope of the SOP through collaboration and coordination

Area-based policies like marine spatial planning (MSP), integrated coastal zone management (ICZM) and marine protected areas (MPA) are fundamental for sustainable ocean planning. Various strategies operate at different levels — including MSP, ICZM, locally managed marine areas, the designation of MPAs and other effective area-based conservation measures (OECMs) (see Figure 2) — and recognise existing ocean and coastal stewardship through Indigenous ocean governance and plans (e.g., Aboriginal-led ocean and coastal management, such as the Mayala Country Plan [MIAC 2019][1]). It's important to note that the scale and geographic scope of these initiatives vary widely depending on their objectives.

> *For further details, including existing limitations of area-based policies, see Step 1 for the "Integrating area-based policies for sustainable ocean planning" section of the full Handbook.*

It's not necessary for a country to implement area-based policies before developing its SOP, but it's vital for the authority that pursues the SOP to adequately recognise and work in harmony with existing ocean stewardship, custodianship and Indigenous Peoples' ocean governance processes. Ideally, the development of SOPs should be in parallel with existing or new area-based approaches to ensure that the management strategies are effectively balanced and coordinated. Failure to do so can lead to policy fragmentation and conflicting mandates that reduce effectiveness. A coherent, aligned planning approach ensures that marine management outcomes are balanced, efficient and durable.

Ocean planning must uphold human rights, including the rights of Indigenous Peoples, to ensure the active participation of all rights holders and stakeholders. SOPs should integrate and incorporate the Universal Declaration of Human Rights, the 2007 UNDRIP and the 2018 United Nations Declaration on the Rights of Peasants and Other People Working in Rural Areas (UNDROP). This should be done by ratifying and implementing these declarations on a national scale, aligning them with existing and new policies and laws and continuously engaging with ITK holders throughout these processes. Furthermore, where possible, SOPs must recognise the plurality of knowledge systems, ensuring that all actors, especially Indigenous

Peoples and local communities, are represented equitably and can meaningfully contribute to ocean-related decision-making (Strand et al. 2024).

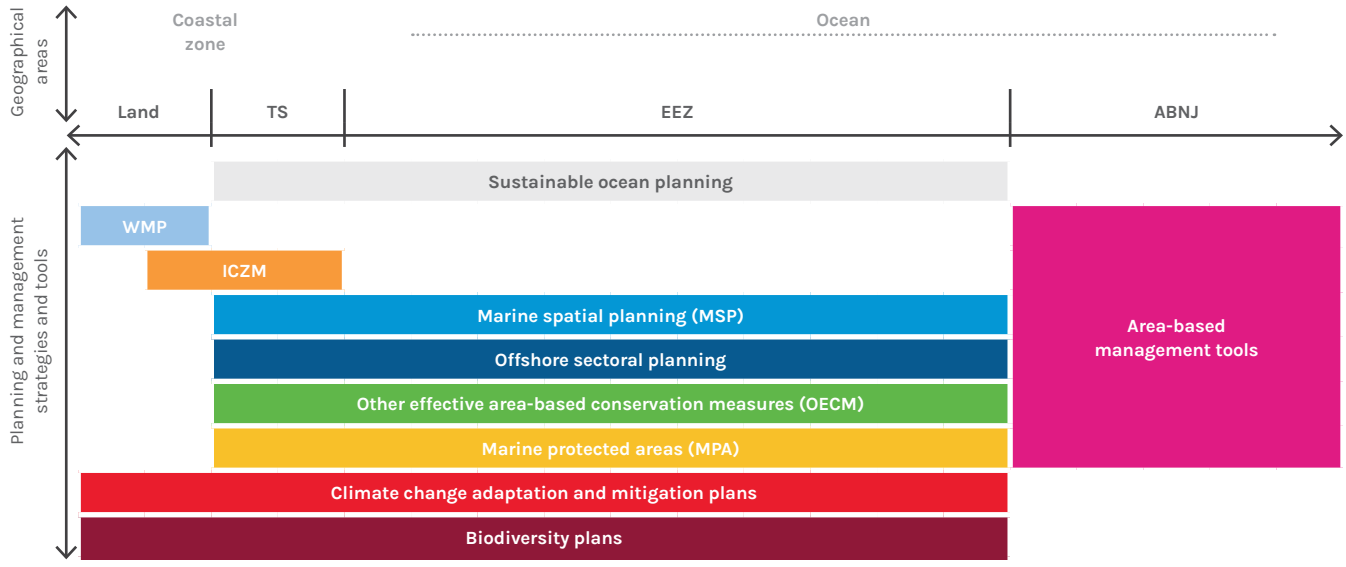
> *For further details, see Step 1 for the "Upholding and respecting human rights, including the rights of Indigenous Peoples" section of the full Handbook.*

SOPs must integrate ocean management with global climate, biodiversity and sustainability goals. The following actions would ensure this successful integration:

- **Embed SOPs in national planning:**
  - Reference SOPs in nationally determined contributions (NDCs) and national biodiversity strategies and action plans (NBSAPs), and vice versa.
  - Align SOP timelines with five-year NDC review cycles.
  - Include SOP targets in national budgets and investment strategies.
- **Ecosystem-based thresholds:**
  - Use best available science to identify thresholds that reflect ecological carrying capacity.
- **Capacity-building:**
  - Train planners and sectoral agencies on ecosystem-based and climate-smart ocean planning.
  - Develop joint data platforms for shared ocean knowledge and scenario planning (see Step 3 for further guidance on data).
- **Policy and legal reform:**
  - Review and update national laws to reduce regulatory fragmentation and empower SOPs as legal frameworks.
- **Finance mobilisation** (see Step 2 for further guidance on financing):
  - Leverage public-private partnerships.
  - Align SOPs with climate finance instruments such as the Green Climate Fund and adaptation funds.

> *For further details, including examples of this integration see the full Handbook's Step 1 for the "Integrating the ocean across climate, biodiversity, and sustainability goals" section.*

FIGURE 2. **Different marine policies and plans covered by sustainable ocean planning**



Notes: ABNJ = areas beyond national jurisdiction; EEZ = exclusive economic zone; ICZM = integrated coastal zone management; TS = territorial sea; WMP = watershed management plan. Depending on the country, the geographic boundaries of these plans might be different. In addition, some plans might be divided by different regions of a country, merged with other plans or have a different name. For instance, some WMPs include portions of marine waters; some marine spatial planning processes include the coastal zone and are called coastal and marine spatial plans; some have comprehensive marine spatial plans that include a strategic vision, thus close to the concept of sustainable ocean planning in national waters.

Source: Marinez Scherer and Michele Quesada.

It's essential to define the scope, vision, and principles of the SOP, including geographic boundaries. Clear, inspiring vision and guiding principles should be co-developed with state, rights holders and stakeholders to direct SOP development and implementation (see Box 2 for steps).

> *For further information on establishing the scope, vision, and principle of the SOP, see Step 1 for the "Defining SOP priorities and scope" section of the full Handbook.*

A critical step for SOP implementation is to create a governance structure with a lead authority that fosters intersectoral collaboration. Where relevant,

BOX 2. **Developing an SOP**

1. Define the scope: What and where to plan

To get started, consider how the five key Sustainable Ocean Plan (SOP) goals — called *ocean transformations* — are best combined to guide your planning process:

- Ocean health: Protect and restore marine ecosystems.
- Ocean equity: Fair access to marine resources for all, especially coastal communities.
- Ocean wealth: Support jobs and industries like fisheries and tourism.
- Ocean knowledge: Make better decisions using science and data.
- Ocean finance: Finance sustainable ocean use.

Next, delineate which geographic ocean zone the SOP will cover. The plan should aim to include all areas under national jurisdiction, a territorial sea and an exclusive economic zone, though some policies might apply only to certain parts.

2. Turn ideas into action: Key policy areas

After setting the focus, think about how to make progress:

- Use tools and processes like marine spatial planning, marine protected areas and integrated coastal zone management.
- Tackle issues like pollution, climate change and food security.
- Support solutions such as restoring coastal ecosystems and reducing emissions.

3. Create a shared vision

Your plan needs a clear, inspiring vision of what the ocean should look like in the future. This is your "big-picture" goal. Who should help define the vision?

Include the following:

- Government agencies – both local and national.
- Indigenous Peoples and local communities.
- Stakeholders from different sectors (e.g., fishing, tourism, environment).
- Non-governmental organisations, civil society organisations and scientists.
- Rights holders.

Ask the following questions:

- Why is the ocean important to our country or region?
- What kind of future do we want for our ocean and communities?
- How does this plan connect to our climate goals or economic priorities?

4. Agree on guiding principles

These are the values that will guide your SOP — for example, transparency, inclusivity, sustainability, fairness. The principles should match your vision and reflect the needs of your marine areas.

5. Next steps: Goals and objectives

Once you've defined your scope, vision and principles, you can move on to setting specific goals and actions. These will turn your vision into results (see the main Handbook, Step 4 section "Goals and objectives," for more details).

BOX 3. Defining a governance framework/ structure

The following are a few key aspects to define a clear governance framework:

- **High-level political leadership** that recognizes Indigenous Peoples' sovereignty and existing governance systems, led and coordinated by a lead ministry or agency.
- **Involvement of all relevant institutions, stakeholders and rights holders**, including local communities, economic sectors, civil society and scientists, managed by an interministerial and intersectoral coordination body. Where transboundary or regional initiatives occur, institutional mapping must include international and regional organisations, including relevant sectoral bodies, to ensure clarity of roles and coordination and to avoid overlap.
- **Alignment with existing policy frameworks**, such as integrated coastal zone management, marine spatial planning, marine protected areas, climate adaptation plans and fisheries management.
- **Regular monitoring and evaluation** built into the process to ensure progress monitoring and adaptive management.

For examples and a step-by-step guide for consolidating the organisational structure and framework, see the main Handbook Step 4 section "Delivering the organisational structure and collaborative frameworks."

these structures should be inclusive of Indigenous governments to ensure meaningful and equitable participation. At the core of this process is the head of government, who must select and mandate a lead ministry or agency to guide the implementation of the SOP. The institution responsible for leading the development of the SOP can be an existing ministry, an interministerial committee or a new institution or agency. See Box 3 for key aspects to defining a governance framework/structure.

> *To understand what is meant by a governance structure, and examples of lead authorities in SOPs, see the full Handbook's Step 1 "Defining a governance structure/ framework" section.*

Stakeholder mapping, engagement and collaboration are essential for an inclusive, participatory, transparent and accountable SOP process. Box 4 outlines the key steps for stakeholder and rights holder engagement.

> *For further information on tools available for ensuring inclusive, participatory, transparent, and accountable stakeholder and rights holder engagement see Step 1 "Stakeholder mapping, engagement and collaboration mechanisms" section of the full Handbook. For example templates, see "Appendix D: Templates for stakeholder and rights holder mapping" and "Appendix E: Templates for consultation records."*

BOX 4. Stakeholder and rights holder engagement in SOP development

A sustainable ocean economy requires an inclusive, transparent and accountable Sustainable Ocean Plan (SOP) development process. Stakeholder and rights holder engagement should be a truly collaborative effort, where knowledge is shared transparently, respectfully and reciprocally.

These are the key steps in stakeholder and rights holder engagement:

- **Identify stakeholders and rights holders.** Map relevant actors across sectors (government, private industry, academia, civil society) while ensuring diverse and underrepresented voices are included.
- **Analyse stakeholders and rights holders.** Use tools like the power/influence-interest matrix to assess influence, interest and engagement needs.
- **Assess networks.** Apply social network analysis to understand existing relationships and improve collaboration.
- **Co-develop engagement plans.** Work with stakeholders and rights holders to define participation strategies, adapting them based on feedback.
- **Use practical engagement approaches.** Use public consultations, online platforms, participatory mapping, workshops and social media to ensure transparent and meaningful collaboration.

Storytelling by communities that have seen the impact of SOPs showcases Indigenous and local knowledge of how ocean spaces were safeguarded in the past and should be included in this process. By prioritising inclusivity and adapting to context, stakeholder and rights holder engagement fosters stronger partnerships and broader support for the SOP.



Step 2: Financial planning and resource mobilisation

To effectively mobilise financial resources, the SOP needs to reflect the existing funding landscape and clearly show the opportunities and economic consequences of transitioning to the SOE. The economic and financial reasoning of the specific SOP must be consistent and clear throughout in order to build a thriving national SOE that engages all stakeholders and rights holders. By designing the financial framework of the SOP in a way that effectively delivers ocean finance to the SOE, governments can help to facilitate this transition. They can ensure that finance is directed away from unsustainable development pathways and sufficient finance is directed towards regeneration, including restoration, protection and sustainable management of ocean ecosystems.

Policy, regulation and governance, involving the subnational and municipal level, are key to creating an inclusive, supportive enabling environment for effective finance flows in the SOE. Governments should: (i) protect natural assets as the foundation of an SOE; (ii) formulate a strong SOP vision for sustainable development; (iii) strengthen governance for de-risking; (iv) use fiscal incentives and disincentives; (v) improve data and transparency; (vi) create innovative finance instruments for implementation; (vii) build capacity of stakeholders and rights holders and encourage the development of a pipeline of micro, small, and medium enterprise (MSME) projects; (viii) facilitate public-private partnerships; (ix) use insurance products to create risk transfer opportunities and attract further financing; and (x) encourage collaboration.

Public expenditures play an important role in this transition, so SOPs must be linked to fiscal measures. Economic instruments relevant to SOPs include taxes, fees and charges, tradeable permit schemes, subsidies, payment for ecosystem services, and biodiversity offsets. Development finance (namely, Official Development Assistance (ODA)) is a small but critical source of external finance. Current estimates show that ocean-related ODA is quite small (only about 1 percent of total global ODA). It is therefore crucial that ODA allocations align with a country's SOP priorities to ensure the most efficient use of this finite source.

> *For further details on government actions, including subnational governments and municipalities role, as well as details on public expenditure for SOPs and the use of ODA, see Step 2 for the "Budgeting and funding mechanisms for SOP implementation" section of the main Handbook.*

Traditional public and private finance methods need to be critically reviewed to identify roadblocks and support their potential to help implement SOPs. In the case of public banks, they can provide technical and managerial expertise and provide patient and catalytic capital that goes beyond what is possible for private banks or funds as they follow public policy priorities. They are especially useful in cases where governments already face macroeconomic challenges. Regional or global public banks are essential for activities that cross national boundaries. For example, the World Bank's multi-donor trust fund, PROBLUE, supported the Ghanian government's SOP by allocating funds to support the preparation of their plan as part of the West Africa Coastal Areas Resilience Investment Project 2 (World Bank, 2024). This initiative aimed to strengthen national marine spatial planning processes and accelerate the development of Ghana's SOP. The support included capacity-building efforts to enhance the country's ability to sustainably manage its marine resources.

> *For further details on public banks role in financing ocean priorities see the main Handbook's Step 2 section on "Traditional finance structures that support the SOE, including current risks (i.e. business cases to redirect)."*

A focus of new ocean finance is regenerative investment to restore, protect and manage ocean assets to build up blue natural capital and resilience. Without this, the ocean system will be pushed to the limits of its' carrying capacity. If we want a system that is resilient for the long-term we need to redirect harmful subsidies and substantially scale public and private sector financing into restoring, protecting and sustainably managing the nation's ocean and coastal natural assets.

> *For further information on creating these new streams, see Step 2 for the "Creating new streams of finance to restore, protect and sustainably manage ocean assets and build ocean resilience" section of the full Handbook.*

Frameworks and principles embedded in SOPs can help redirect finance flows to strengthen ocean sectors. The Sustainable Blue Economy Finance Principles of the UNEP Finance Initiative (UNEP FI) and the nature-positive concept provide relevant guidance for SOPs (UNEP FI, n.d.). They are designed to provide guardrails and guidelines for future sustainable financing of the ocean and ensure that ocean-related finance delivers long-term value without having a negative impact on marine ecosystems or on efforts to reduce carbon emissions. Integrating ocean priorities into sustainable finance taxonomies and agreeing on transparent metrics and indicators are all part of a financially effective SOP design. Although climate messaging is gaining traction across the finance sector, the risks associated with the ocean-climate nexus are not always understood (Ford et al. 2022). Ocean-finance literacy must be strengthened so that the materiality of the risks associated with unsustainable ocean economy practices and the potential opportunities offered by the sustainable ocean economy is understood and built into decision-making frameworks.

> *For more in-depth information on actions to redirect mainstream finance, see the full Handbook's Step 2 for the "Principles, frameworks, guidance and other tools for mainstream finance to redirect investment, capital and trade towards SOE financing" and "industry sector pathways for mobilising public and private financing for the SOE" sections.*

Early-stage finance and support through incubators, accelerators and impact funds[2] can play an important role in fostering SOE innovation and development; those pathways should be fully integrated into SOPs. Ensuring that countries implementing SOPs have access to financial mechanisms can help mobilise capital for deploying innovative and nature-positive solutions at scale. Without stronger policy alignment and financing frameworks that support nature-positive alternatives, the status quo of environmental degradation will remain. For example, advancing autonomous ocean drones such as Saildrone for scalable, cost-effective oceanographic data collection, enables better decision-making for conservation and industry alike. This showcases how investment-backed data solutions can drive systemic change and create real economic value.

SOPs should also support a systemic approach, using the holistic concept of blue infrastructure finance to support coastal and seascape regeneration, adaptation and resilience. For the SOP practitioner, this means early engagement with stakeholders directly involved in the production and maintenance of large-scale infrastructure. This includes local authorities, developers, businesses, logistics providers, utilities and regulators. The focus needs to be on how the mitigation hierarchy will be employed and how any potential ecosystem impacts and regeneration benefits will be measured, reported, monitored and monetised.

For further details on integrating nature-based solutions and blue natural capital considerations into infrastructure finance planning, see the main Handbook's Step 2 section on "Blue infrastructure finance for systemic regeneration of marine ecosystems."

By building large blue capital markets, liquid finance flows into the SOE can be facilitated by engaging with large-scale financial actors, asset owners and regulators, including central banks and finance ministries.

SOP design can play an important role in building up both domestic markets and linkages to global capital markets. From a government perspective, this means that the finance and economics/ planning ministries need to be involved, as do central banks and financial regulators. The latter are increasingly concerned about the systemic risks from environmental and climate factors, so the SOP approach will be one way to help address these challenges.

For further details on building up domestic markets and linking to global capital markets see the main Handbook's Step 2 section on "Blue capital markets."

Equally critical is SOP engagement at local, community and micro-finance levels; this enables those most in need to access finance and play a full role as essential SOE actors. If we are to seek the transition to an equitable and inclusive sustainable ocean economy at the community level and secure the successful delivery of SOPs, new capital flows must be proactively directed to support the "sustainable" development objectives of coastal communities and thereby create social value while securing resilient ecosystems. Key actions include: (i) creating a supportive enabling environment; (ii) prioritising the identification of pipeline opportunities and creating incubation and acceleration opportunities; (iii) making available development funding and seed investments for start-ups; (iv) exploring, developing and supporting aggregation models for pipelines and revenue streams to facilitate scalability and replicability and to reduce transaction costs; (v) encouraging robust multi-stakeholder and rights holder governance.

For further details on these key actions see the main Handbook's Step 2 section on "Communities and micro-finance".



Step 3: Defining the baseline and analysing potential future conditions

To develop evidence-based, actionable and inclusive SOPs, countries should first establish baselines that are context specific and responsive to likely future scenarios. Where possible, baseline data should be open and accessible to support transparency and accountability. Understanding these baseline conditions is essential for identifying key issues, opportunities and threats that should be addressed through the sustainable ocean planning process. Data-sharing, access and discovery are central to a robust data-driven SOP, however, the process is fraught with challenges that span technical, legal and organisational domains. A primary need, and thus potential challenge, rests in establishing robust protocols for the secure and compliant exchange of data. The very nature of an SOP means that these protocols need to be shared across government and public institutions as well as external actors.

When possible, countries should use diverse approaches for gathering baseline information — from traditional scientific sampling and remote sensing to participatory methods incorporating Indigenous and local knowledge. Detailed and spatially explicit data are especially valuable for refining details, spatial planning and assessing SOP effectiveness over time.

> *For data collection methods including benthic habitat mapping, marine and coastal ecosystem and habitat assessments, and social data and ITK, see the main guide "Appendix F: Relevant data collection methodologies". For lists of useful datasets, access methods, and moving from validation to visualisation to publishing of data, see the main Handbook's "Appendix G: Sourcing and accessing data."*

Integration of environmental, economic and social data is crucial for a holistic understanding of ocean social-ecological systems. Through comprehensive environmental data collection, practitioners gain a thorough understanding of



the current state of the marine environment and can anticipate future conditions, including the cumulative impacts of human activities, land-based influences and the pervasive effects of climate change. Practitioners also need a good understanding of the ocean economy, such as the contribution of ocean sectors to a country's economy (e.g. through ocean economy satellite accounts, OESA), and how much public expenditure is being directed towards the ocean. Incorporating social data (e.g., employment in ocean sectors, seafood nutrition security, social cohesion, housing affordability, health indicators, etc.) into SOPs is paramount as it provides understanding to human-ocean interactions, promotes equity and inclusion, enhances stakeholder and rights holder engagement, measures social impacts, builds resilience, aligns with broader ocean data strategies, and ensures the long-term success of SOPs.

> *For further information on these different types of data, including examples of OESA use, social data examples, and methods of co-developing SOPs with ITK holders, see Step 3 for the "Identifying and collecting baseline environmental, economic and social data for sustainable ocean planning" section of the full Handbook.*

By analysing future trends and developing scenarios, countries can anticipate marine environment changes that may impact SOP design, implementation and effectiveness. This requires the development of decision support systems which can be used to achieve ambitions in ecological protection and to meet socio-economic needs. Ocean accounts are also important because they provide a holistic view of the ocean and its resources, enabling decision-makers to move beyond a narrow GDP-based perspective and providing a way to understand success over time. Methods of projecting future conditions will be unique to every situation, but should cover economic, environmental, and social outlooks.

> *For examples of decision support systems, see the main Handbook's Step 3 section on "decision support systems for resource allocation and scenario planning," for details on the tasks ocean accounts enable decision makers to perform see section "ocean accounting," and for methods of projecting future trends across the economic, environmental, and social outlooks see "Projecting potential future conditions."*

Robust information for baselines and future conditions can help develop climate-resilient strategies and identify sustainable development opportunities. It is vital that a robust and precautionary impact mitigation strategy is developed to ensure the continued functioning of marine ecosystems and their benefits. This can take a four phase approach including: (i) impact assessment, (ii) avoidance and minimisation, (iii) mitigation measures, and (iv) compensatory measures for unavoidable impacts. It's vital also that the relevant indicators are selected. These will be highly contextual and dependent on specific SOP objectives and approaches, but they should cover the three pillars of sustainable development to be useful in monitoring and evaluation: environmental, economic and social.

> *For an in-depth explanation of the mitigation strategy phases see main Handbook's Step 3 section on "Impact mitigation strategy: Step-by-step approach for assessing and minimising ecosystem and social impacts."*
>
> *For descriptions of the types of indicators available see Step 3 section "Selecting relevant indicators." For a comprehensive, but not exhaustive, list of indicators, see "Appendix H: Indicators" and for the full list of the Essential Ocean Variables see "Appendix I: Global Ocean Observing System – Essential Ocean Variables."*

Transparent data management, sharing and standardisation aid in communicating complex spatial information to stakeholders and rights holders. Practitioners should select data with the correct spatial and temporal resolution for their planning area and goals. The data should support baseline assessments, track changes over time and address the key planning questions.

> *For further information on geospatial data, including key categories, see Step 3 for the "Geospatial data for illustrating jurisdictional claims, activity zones, protected areas and critical ecosystems" section of the full Handbook.*

Data availability is not evenly distributed across domains, spatially or temporally. Although it's crucial to include the best available data, this should not delay the development of an SOP, which might include strategies to address the gaps and deficiencies.

Step 4: The building blocks of SOPs

SOPs must be developed as strategic, actionable plans that set clear goals, objectives, policies, standards and actions across all ocean sectors. Its development must include a strategic plan, policies, governance architecture, and a financial framework (Figure 3).

Objectives should be SMARTIE — specific, measurable, achievable, relevant, time bound, inclusive and equitable — to ensure meaningful progress. They must reflect the desired outcomes, vision and principles, and behavioural changes that ensure the achievement of the SOP goals. The SOP goals should consider the three pillars of sustainable development: environmental, economic and social, and align with international commitments to ensure progress towards global sustainability targets. To achieve each of the SOP goals and objectives, SOP actions should be defined. These actions lead to the needed transition to a sustainable ocean economy and enable appropriate actors to develop their own related actions, which can be integrated into their operational approaches.

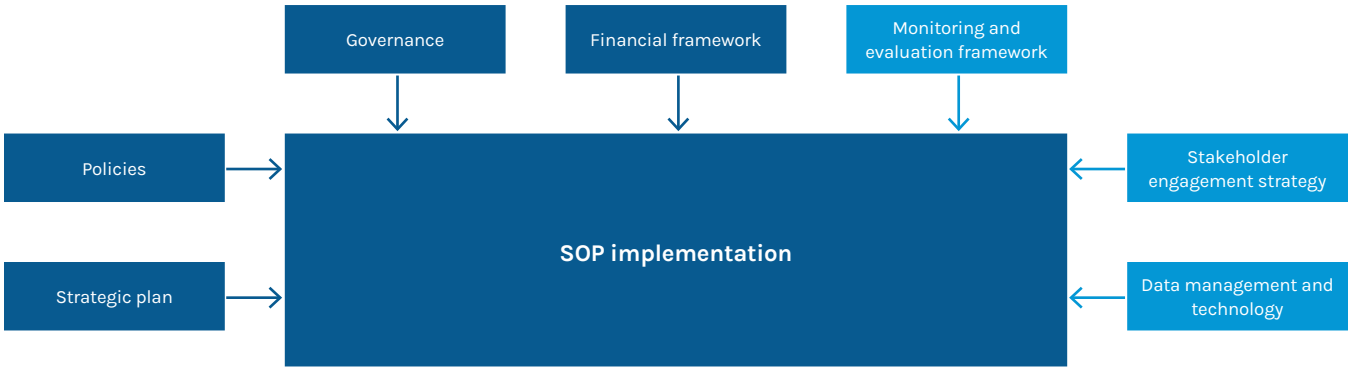
> *For examples of SOP goals and objectives, as well as methods for developing them, see Step 4 for the "Goals and objectives" section of the full Handbook. For details on SOP actions, including steps for developing them and examples, see Step 4 for the "SOP actions" section.*

To avoid fragmentation and enable smooth implementation, policy design must be integrated and regulations aligned across all levels of government. Stakeholders and rights holders must be engaged from the start. The effective development and implementation of the SOP will require ongoing regulatory adjustments and policy redesign, particularly if new laws are enacted. Interconnected spatial plans at different scales (local, subnational, national and regional) should be developed to ensure interconnectivity of policies, plans and projects, enabling local actions to contribute to broader national and regional goals.

> *For further details on establishing suitable enabling conditions, including activities to integrate SOP policies with existing national and local policies, and the key elements a multiscale spatial plan approach can help coordinate across see the main Handbook's Step 4 section on "Policy integration and regulatory adjustments."*

A robust governance architecture requires both institutional leadership and collaborative frameworks to ensure cross-sector coordination and accountability. An organisational structure is required for the technical and functional delivery of the SOP activities as well as to define responsibilities for achieving the SOP vision and goals. Different

FIGURE 3. **Outline of SOP implementation and guidance requirements**



Source: WRI authors.

coordination types are needed to facilitate integrated ocean management including strategic and political, cross-institutional, planning and policy, and international. Mechanisms like public-private partnerships, maritime clusters and knowledge brokers can enhance innovation, coordination and shared ownership.

> *For steps for establishing the institutions, stakeholders and rights holders responsible for the SOP, and for establishing coordination mechanisms, see Step 4 "Delivering the organisational structure and collaborative frameworks" section of the main Handbook.*

SOP implementation relies on strong financial planning, blending domestic resources with external financing to ensure long-term viability and impact. The financial framework must support the achievements of the SOP goals, objectives and outcomes and provide opportunities to unlock SOP funding as well as finance for other sector management approaches. To ensure ownership by the national government, its budget should include cash and non-cash (e.g., staff cost) allocations for SOP preparation and implementation.



Step 5: Implementation and action planning

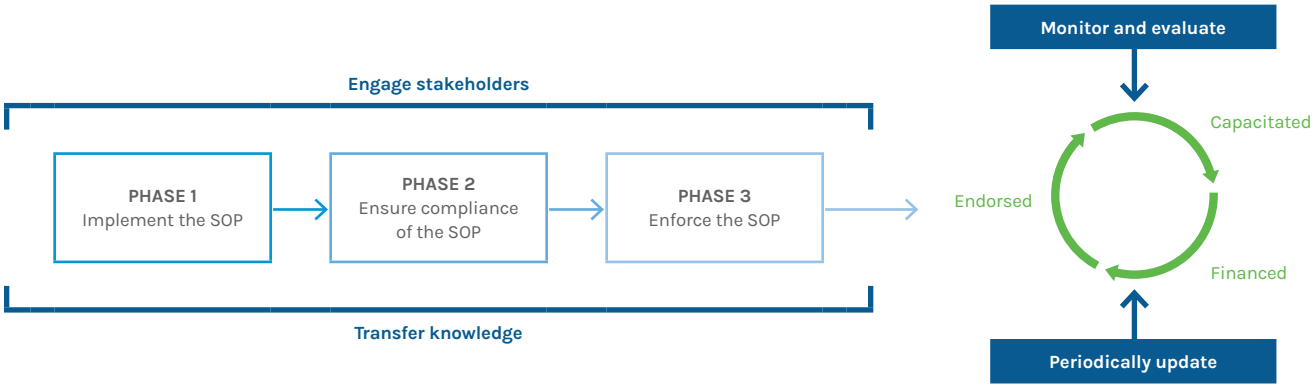
SOP implementation is phased, inclusive, integrated, informed and continuous, moving from institutional coordination and rollout (Phase 1) to ensuring compliance (Phase 2) and then to enforcement (Phase 3), with feedback loops built into each (Figure 4). Typically, existing sector-specific management institutions will carry out most actions towards implementing the plan, with the pre-determined overarching lead agency or interagency coordinating and overseeing Phase 1. Several implementation steps for monitoring and evaluation can be taken, including establishing monitoring systems, regular analysis, evaluation and reporting, and periodic impact assessments. An adaptive management approach should be taken and to ensure that SOPs are accepted by the public, practitioners should prepare transparent reports and increase public awareness by sharing these reports through government websites and international ocean databases. For Phase 2, clear, well-structured actions are needed as they are more likely to lead to successful compliance. For Phase 3, governments can implement inspections to assess compliance, negotiations with violators to develop solutions for compliance and legal action to compel adherence, including penalties or permit withdrawals when necessary.

> *For further details on the three phases of SOP implementation, see Step 5 for the "Developing a phased implementation plan" section of the full Handbook.*

The design of the plan, its legal grounding and institutional cooperation across scales and boundaries all shape implementation success. The plan should: ensure sufficient institutional capacity and strengthen this to enable ocean literacy; define clear objectives early; carefully evaluate the data used; quantify and assess trade-offs and cumulative impacts; and ensure adaptive management. It should involve coordination and integration across boundaries, between different levels of governing bodies, across policies and sectors, using diverse knowledge types, and with a variety of ecosystem-based approaches. The plans governance should be exercised through legal, administrative and other social processes, and the authority for SOP implementation must be established prior to planning to continuously assess and adjust to changes in the legal status over time.

> *For further details on the suggested plan attributes, its development and social context, the integration types, and legal context, see the introduction to Step 5 of the full Handbook.*

FIGURE 4. **SOP implementation across three phases**



Notes: Stakeholder and rights holder engagement and transdisciplinary knowledge transfer guide the process, which leads to a plan that has all three impact attributes (endorsed, financed and capacitated). Implementing a Sustainable Ocean Plan is an iterative process that requires periodic monitoring, evaluation and updates to ensure its effectiveness.

Source: Adapted from Ehler and Douvere 2009.

A mix of public, private, Indigenous, civil society and scientific actors should be engaged — with shared accountability — throughout the SOP life cycle. Ensuring a balanced mix of participation and engagement across sectors is essential to reduce conflict and ensure legitimacy and support for the plan. Importantly, for a successful phased implementation process, stakeholders and rights holders across sectors must be engaged and knowledge transferred across all phases (implementation, compliance and enforcement).

> *For further details on the types of stakeholders and rights holders who should be engaged, including international institutions, national and subnational governments, civil society and ocean industries see the main Handbook's Step 5 section on "Assigning roles and responsibilities across sectors."*

Political commitment and long-term resourcing from domestic and external sources must underpin implementation and adaptation efforts. A successful plan must be officially endorsed at the highest political levels, such as by the president, prime minister or relevant subnational leaders, including Indigenous Peoples when applicable. To ensure that the SOP that is prepared and implemented is a shared agenda, the plan must be officially included in the substance of the short-, medium- and long-term national development planning policies, which explicitly state the objectives and strategies for achieving each SOP indicator.

> *For further details on SOP endorsement, see the main handbook's Step 5 section on "Endorsing an SOP," and for information on indicators for implementation, see the "Selecting ocean indicators" section as well as those suggested for Step 3 in the Step 3 summary above.*

A strong monitoring and evaluation framework that includes periodic data collection under FAIR (findable, accessible, interoperable, reusable) and CARE (collective benefit, authority and control, responsibility, ethics) principles (Carroll et al. 2021), milestone tracking and policy feedback enables SOPs to evolve with science, environmental shifts and societal needs. A centralised data platform can unify ocean planning efforts and foster trust through openness and informed decision-making. Fit-for-purpose data management systems are vitally important because they ensure that essential data are not only collected but also retained. The proposed framework components for monitoring and evaluation include data analysis, evaluation, adaptive management and transparent reporting and public awareness.

> *For further details on these framework components, see Step 5 for the "Establishing a monitoring and evaluation framework" section of the full Handbook.*



Endnotes

1. When referring to peoples, the terms *Aboriginal* and *Indigenous* are used interchangeably. *Aboriginal* is a legally defined term in certain nation-states to describe the original inhabitants of the land and waters in specific areas. *Indigenous* is also an internationally accepted term to describe the original inhabitants, whether or not they are legally recognized.

2. Incubators and accelerators are organisations or programmes that provide support and resources to start-ups and early-stage companies for their development. Impact funds are investment vehicles that aim to generate a measurable and positive environmental or social impact as well as a financial return.

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