

APPLYING MARINE AND COASTAL AREA-BASED MANAGEMENT APPROACHES TO ACHIEVE MULTIPLE SUSTAINABLE DEVELOPMENT GOAL TARGETS

SUMMARY FOR POLICY MAKERS



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Cover image

Clown Anemonefish swimming through stinging sea anemones, David Clode, Australia, Unsplash

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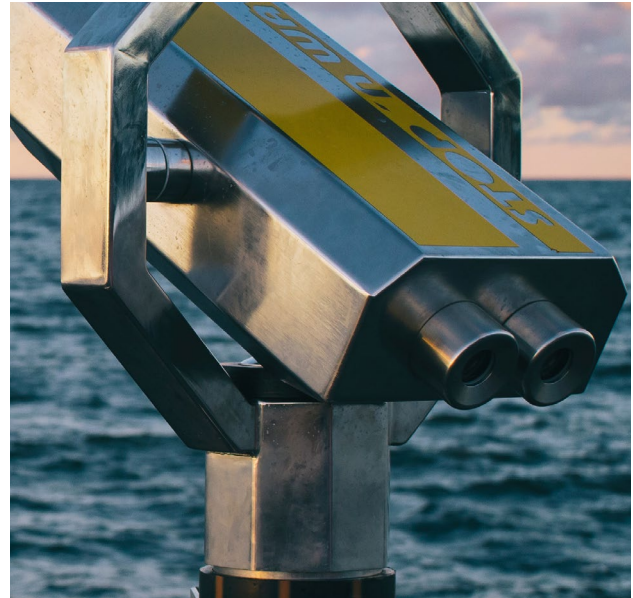
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Summary for Policymakers



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INTRODUCTION TO AREA-BASED MANAGEMENT APPROACHES

KEY MESSAGES FOR POLICYMAKERS

- Marine and coastal area-based management approaches can contribute towards the delivery of a range of Sustainable Development Goals where their objectives are aligned.
- Area-based management approaches have the potential to support Sustainable Development Goals and associated Targets because of their attributes, which include stakeholder engagement, the ecosystem approach and spatial focus. The way in which such attributes are applied will determine the targets that can be achieved.
- Different types of area-based management approaches have the potential to contribute to different Sustainable Development Goals.
- Enabling conditions support more effective delivery of area-based management approaches, thus supporting delivery of Sustainable Development Goal Targets. Key enabling conditions are: governance, institutional framework, funding and capacity.
- Area-based management approaches can be used independently, or in combination with other types of approaches, to address a range of marine and coastal policy issues. They have the potential to serve as a mechanism to sustainably balance the use of the ocean with its conservation needs.

PURPOSE OF THE DOCUMENT

This document summarises the key findings of a Technical Report exploring the potential contributions of marine and coastal area-based management approaches to Sustainable Development Goals¹. The document also presents a set of conceptual guidelines on the implementation of area-based management approaches to successfully support Sustainable Development Goals. Evidence from real-world application of area-based management approaches is provided to support these guidelines.

MARINE AND COASTAL AREA-BASED MANAGEMENT APPROACHES

A marine or coastal area-based (or spatial) management approach enables the application of management measures to a specific ocean area in order to achieve a desired outcome. At present, a wide variety of area-based management approaches are in use, each with their own purpose, mandate, guiding authority or application guidance.



1. UN Environment (2018). The Contributions of Marine and Coastal Area-Based Management Approaches to Sustainable Development Goals and Targets. UN Regional Seas Reports and Studies No. 205 (http://wcmc.io/oceansdgs_technicalreport)

Some approaches focus on the management of individual maritime sectors operating in a specific area, such as fisheries closure areas, pollution management zones, and seabed mining exclusion areas. Other approaches, such as Marine Spatial Planning (MSP) and Integrated Coastal Zone Management (ICZM), seek to coordinate and balance the needs of several types of activity within the same area. It is important to recognise that the term ‘tool’ can also be used to describe methods of area-based management, particularly those relating to a specific sector. However, for the purposes of this work, the term ‘approaches’ has been used as it encompasses a wide range of methods, including those that are cross-sectoral and wider scale in nature.

WHY USE AREA-BASED MANAGEMENT APPROACHES?

Regulation of marine or coastal activities using an area-based management approach may be required for a number of reasons. Examples include supporting blue growth² and sustainable development;

Previous page: Humpback whale splashing in ocean, Fiji, Sho Hatakeyama; Welsh coastline, Wales, Pixabay

conserving critical habitats or marine features, such as coral reefs or seamounts; and aligning with provisions or requirements set out in national or regional policies and legislation. The application of area-based management approaches can therefore have a variety of origins. For example, national policies may establish area-based management approaches to address particular issues such as unsustainable resource use, or as part of national or sub-national management processes to balance the needs of many sectors. Alternatively, their implementation at the national level may be in response to obligations under international or regional conventions and agreements, including the Convention on Biological Diversity (CBD), United Nations Convention on the Law of the Sea (UNCLOS) or the United Nation’s 2030 Agenda for Sustainable Development, which sets out seventeen Sustainable Development Goals.

2. [Blue Growth](#) is the long-term strategy to support sustainable economic development in the marine and maritime sectors as a whole

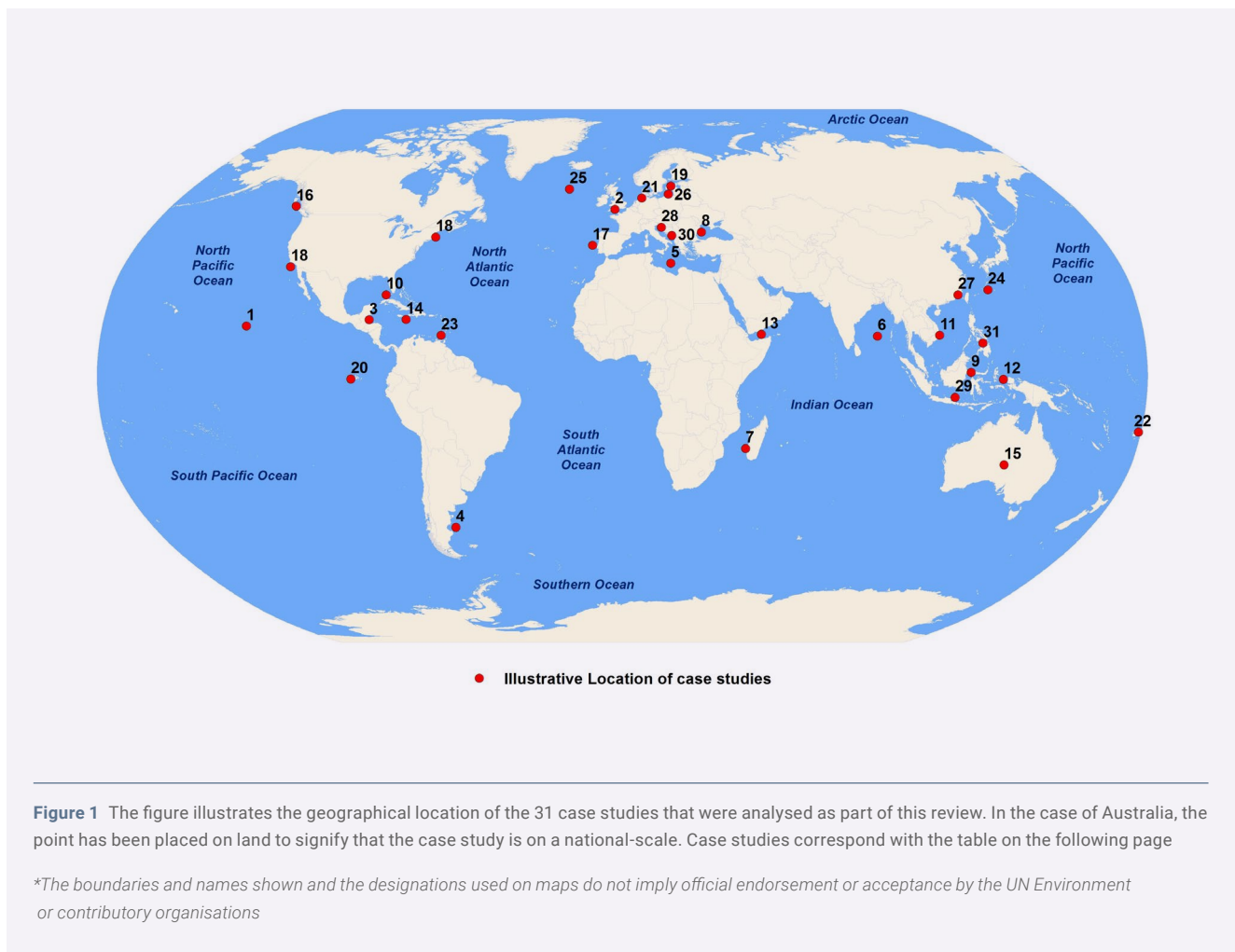


Figure 1 The figure illustrates the geographical location of the 31 case studies that were analysed as part of this review. In the case of Australia, the point has been placed on land to signify that the case study is on a national-scale. Case studies correspond with the table on the following page

**The boundaries and names shown and the designations used on maps do not imply official endorsement or acceptance by the UN Environment or contributory organisations*

No.	Approach	Case Study
01	Area of Particular Environmental Interest	Clarion-Clipperton Zone, Mid Pacific
02	Fisheries closure and conservation area	Lyme Bay Fisheries and Conservation Reserve, United Kingdom
03	Integrated Coastal Zone Management	Integrated Coastal Zone Management, Belize
04	Integrated Coastal Zone Management	Patagonia Coastal Zone Management Plan, Argentina
05	Integrated Coastal Zone Management	Mediterranean Integrated Coastal Zone Management Protocol
06	Large Marine Ecosystem	Bay of Bengal Large Marine Ecosystem Project (BOBLME)
07	Locally Managed Marine Area	Velondriake Locally Managed Marine Area, Madagascar
08	Marine Protected Area	Black Sea
09	Marine Protected Area	Coral Triangle Initiative
10	Marine Protected Area	Florida Keys National Marine Sanctuary, USA
11	Marine Protected Area	Hon Mun Marine Protected Area, Viet Nam
12	Marine Protected Area	Raja Ampat Marine Protected Area Network, Indonesia
13	Marine Protected Area	Red Sea Marine Protected Area Network
14	Marine Protected Area	Caribbean Specially Protected Areas and Wildlife Protocol
15	Marine Spatial Planning	Bioregional Planning, Australia
16	Marine Spatial Planning	Pacific North Coast Integrated Management Area (PNCIMA), Canada
17	Marine Spatial Planning	Marine Spatial Planning, Portugal
18	MARPOL Special Area (Emission Control Area)	MARPOL North American Emission Control Area, USA
19	MARPOL Special Area (Sewage)	Special Areas for Sewage, Baltic Sea
20	Particularly Sensitive Sea Area	Galapagos Archipelago
21	Particularly Sensitive Sea Area	Wadden Sea Particularly Sensitive Sea Area
22	Ridge to Reef	Kubulau Marine Protected Area, Fiji
23	Ridge to Reef	Grenada Ridge to Reef Programme
24	Ridge to Reef through community based management	Nansei Shoto Ecoregion, Japan
25	Vulnerable Marine Ecosystem	Mid-Atlantic Vulnerable Marine Ecosystem, North-East Atlantic
26	Integrated Coastal Zone Management and Marine Spatial Planning	Baltic Sea
27	Integrated Coastal Zone Management	Xiamen City, Fujian Province, China
28	Integrated Coastal Zone Management and Marine Spatial Planning	Croatia
29	Marine Spatial Planning	Indonesia
30	Integrated Coastal Zone Management and Marine Spatial Planning	Boka Bay, Montenegro
31	Integrated Coastal Zone Management	Bohol Province, Philippines

AREA-BASED MANAGEMENT APPROACHES SUPPORT THE DELIVERY OF MANY SUSTAINABLE DEVELOPMENT GOAL TARGETS

A range of area-based management approaches were analysed through twenty-five case studies of real-world application across a number of geographical regions (as shown in Figure 1).

Area-based management approaches are well placed to support the achievement of Sustainable Development Goals. For example, analysis of the twenty-five case studies (Figure 1) illustrated that such approaches are able to simultaneously support Targets under Sustainable Development Goal 14 'Life Below Water', and Targets under a number of other Goals. From the case studies, it is possible to identify where approaches are mutually supportive. For example, **Target 12.2 on sustainable management and efficient use of natural resources**, links to sustainable fisheries harvests under **Target 14.4**. Another example is where a case study supported **Target 8.9 on promoting sustainable tourism and local culture**, and also **Target 14.2 on sustainable management and protection of marine and coastal ecosystems**. These Targets were collectively delivered in a number of case

studies, including the Marine Bioregional Planning Process undertaken for the Australian Exclusive Economic Zone. Figure 2 shows the Sustainable Development Goal Targets for which contributions or potential contributions were identified from the area-based management case studies. The full analysis is available in the Technical Report³.

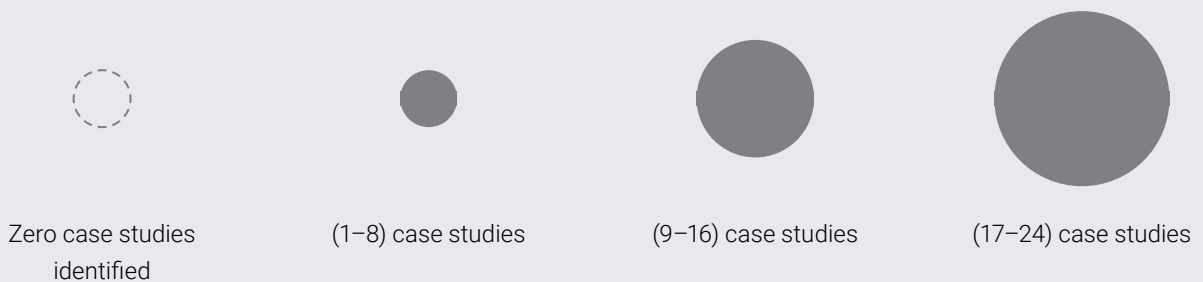
The circles in Figure 2 represent the number of instances in which a particular objective of the approach in each of the case studies aligned with that Sustainable Development Goal Target. Larger circles represent a greater number of case studies which aimed to achieve results in alignment with a particular target. Dashed circles indicate where potentially relevant Targets were assessed but not considered to link to any of the case studies. Results from all twenty-five case studies were merged and rounded into score ranges. Each of the twenty-five case studies of area-based management approaches contributed towards the delivery of more than one Target. Contributions were identified through alignment of the approach objective with the aim of the Sustainable Development Goal Target.

3. UN Environment (2018). The Contributions of Marine and Coastal Area-Based Management Approaches to Sustainable Development Goals and Targets. UN Regional Seas Reports and Studies No. 205 (http://wcmc.io/oceansdgs_technicalreport)

Figure 2 Contribution of area-based management approach case studies to Sustainable Development Goals



LEGEND



**contributions are specific to the twenty five case studies reviewed in this study in the legend box*

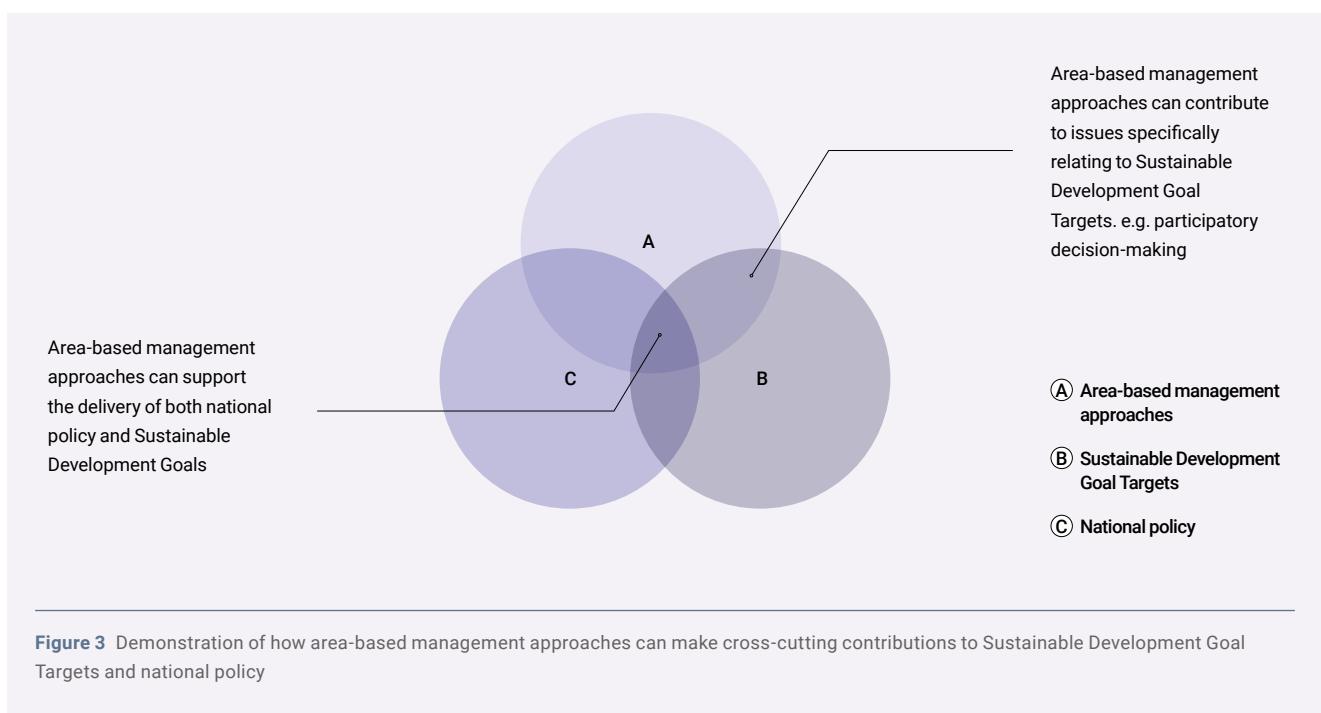


Above: Local Indian fishermen bringing in their catches of the day, India.
Julita Bodensee, Pixbay

MAXIMISING THE DELIVERY OF SUSTAINABLE DEVELOPMENT GOALS

Many area-based management approaches were implemented to deliver national policies or objectives prior to the establishment of the Sustainable Development Goals in 2015. However, many national policies on marine and coastal resource management and protection, and the Sustainable Development Goals as a whole, aim to address widespread and longstanding issues faced by humanity, such as climate change or sustainable resource use. Since the development of Agenda 2030 in 2015, national-level formulation of marine and coastal management policies are increasingly integrating the global SDGs. Thus, national approaches will further support the delivery of SDGs. As a result, area-based management approaches designed before the Sustainable Development Goal Targets often include highly relevant aims. Thus, where the aims of national policies and Sustainable Development Goal Targets align, there is strong potential for area-based management approaches to support the delivery of both.

The Sustainable Development Goals are all interlinked and intended to be delivered as an integrated package. Area-based management approaches can support delivery of this interlinked package. The objectives of area-based management approaches aim to deliver those of the national policy under which they are implemented, often aligning with the aims of Sustainable Development Goals. In addition to the overall policy alignment, the specific way in which an approach is designed and implemented is likely to increase the number of Targets supported, and/or the quality of their contributions. For example, stakeholder engagement is unlikely to be the primary objective of an area-based management approach, however, it is a key attribute in its design. Therefore, the use of area-based management approaches, which include stakeholder engagement, will not only assist in the delivery of the policy objectives, but also contribute to a range of SDG Targets, including **Target 16.7** on inclusive and participatory decision-making at all levels (see Figure 3 for an illustration of this).



KEY ATTRIBUTES OF MARINE AND COASTAL AREA-BASED MANAGEMENT APPROACHES

The design of area-based management approaches plays a central role in supporting the delivery of Sustainable Development Goals. Seven key attributes, common to all area-based management approaches, were identified in the Technical Report⁴ and are outlined in Figure 4. These attributes represent various design characteristics of each approach. Thus, when selecting an appropriate area-based management approach to address a particular policy issue, the way these attributes are used have the potential to facilitate successful application. Further discussion on the linkages between key attributes and successful approach application to support Sustainable Development Goal Targets is provided in the section below. Each of these key attributes has been explored in detail in the main Technical Report. Practical guidance for the implementation of an area-based management approach in relation to each attribute is also provided.



Above: Ariel shot of Turkish body of water, Turkey, Serkan Turk, Unsplash;

Spatial Focus

Marine area-based management approaches include those focused solely within the marine realm. Some approaches are focused across the coastal zone and encompass both marine and terrestrial areas, taking into account land use activities which may impact on downstream habitats and the ocean.

Sector Focus

Single sector approaches are implemented by a particular sector and implement management measures that apply only to the activities of that sector. Multi-sector area-based management approaches take into consideration the needs of multiple different sectors and implement measures that are applicable to all sectors involved.

Data foundation

Data can be used to help inform and shape the application of an area-based management approach by providing spatially explicit information for the chosen area.

Adaptive management

The management approach can be adapted in response to change. Adaptation should be based on best available evidence, collected through regular evaluation and monitoring processes.

Transboundary Focus

Transboundary area-based management approaches transect a border or boundary, including ecological, jurisdictional and administrative boundaries. Approaches can be applied at different scales, from local to international, recognizing the highly connected nature of the marine environment.

Stakeholder Engagement

Participatory stakeholder engagement involves the inclusion of affected stakeholders in planning, design and/or implementation of area-based management measures. Stakeholders could include, for example, representatives from local communities, marine sectors or government.

Ecosystem Approach

A strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way (CBD, 2000).

4. Full details of the case study analysis can be found in UNEP-WCMC, 2018 (wcmc.io/oceansdgs_conceptualguidelines)



Figure 4 Key attributes of area-based management approaches, identified following analysis of twenty-five case studies.

HOW ATTRIBUTES OF AREA-BASED MANAGEMENT APPROACHES FACILITATE DELIVERY OF OBJECTIVES

Four different attributes of area-based management approaches are illustrated below. This section provides examples of how the attributes, part of the design of

area-based management approaches help support Sustainable Development Goal Target.



SPATIAL FOCUS

The Spatial focus of an approach enables the identification of where to target specific management measures. The location of pressures, and the identification of who the stakeholders are, can be facilitated by the spatial focus. If such threats are land-based, then consider the use of Integrated Coastal Zone Management. For example, the Protocol on Integrated Coastal Zone Management in the Mediterranean (ICZM Protocol, 2011) provides a regional framework to implement obligations relating to integrated coastal management within the entire Mediterranean Basin – as set out under the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (1978). To effectively guide actions at local levels, it is important that the ICZM approach advocated in this regional framework is applied at the national level (Soriani, Buono and Camuffo, 2015).

Area-based management approaches can address issues across different scales and can aid the definition of appropriate boundaries for management and the sectors involved. For example, sewage dumping in a specific area offshore, or within an entire sea basin, may be addressed by a MARPOL Special Area – a single-sector approach relating to the shipping sector. The whole Baltic Sea is designated as a Special Area and contributes to **Target 12.4 on management of chemicals and wastes** and **Target 14.1 on the prevention and significant reduction of marine pollution**.



ECOSYSTEM APPROACH

The Ecosystem Approach is considered a key component of area-based management and facilitates the use of ecological information in each stage of an approach. For example, the boundaries, spatial extent and design of management approaches can be informed by ecological information. For example, in the Kubulau District in Fiji the spatial coverage and boundary of an integrated ecosystem-based management plan for the area are based upon traditional district units and customary fishing ground boundaries (Jupiter, 2011). The approach incorporates an MPA Network and recognises traditional land tenure boundaries and brings together communities from both upland and lowland areas to facilitate holistic community management of ecosystems, thus contributing to **Target 12.2** on the sustainable management and use of all natural resources, **Target 14.2 on the sustainable management of ecosystems**, and **Target 15.9 on the integration of ecosystem and biodiversity into national planning**.



SECTOR FOCUS

Area-based management approaches can focus on **single or multiple sectors**, depending on their policy ambitions. For example, the single-sector approaches can be used to address sector-specific issues, such as MARPOL Special Areas for Sewage management (supporting **Target 12.4 and 14.1 on pollution control**) or fisheries closures for the recovery of fish stocks (contributing to **Target 12.2 on sustainable resource management and 14.4 on regulation of fishing**). The number of sectors included within an area-based management approach will influence the range of issues it can address. In line with this, a combination of area-based management approaches can be implemented in the same area in order to achieve a variety of objectives. For example, Marine Spatial Planning can be used as an overarching framework to encourage the implementation of sector-specific approaches in a particular area and facilitate cross-sectoral collaboration. A coordination between sectors could support **Target 17.16 on multi-stakeholder partnerships**. Cross sectoral management can contribute towards national objectives such as **promoting sustainable tourism (in line with Target 8.9)**.



STAKEHOLDER ENGAGEMENT

Stakeholder engagement is facilitated by area-based management approaches and can enable participatory decision-making to meet a range of needs. Including relevant stakeholders in an area-based management process is important to ensure their needs are considered and encourages stakeholder buy-in and support. Where many stakeholders are present and an integrated approach required, MSP or ICZM may be appropriate.

There are numerous different mechanisms for stakeholder engagement. For example, in Belize, a six year process to develop an Integrated Coastal Zone Management Plan under the Coastal Zone Management Act (1998) involved extensive multi-stakeholder participation, with representation from different sectors, to ensure management measures were multi-sectoral and contributing to **Target 16.7 on participatory decision making**. In Madagascar, the establishment of a participatory information sharing network facilitated cooperation and partnerships between managers and stakeholders across the network, **17.16 on partnerships**. Engagement mechanisms should be selected based on context, resources and desired outcome.



Left: Fishing boats lay beached at low tide, Poland, Sebastian Kaczmarczyk, Unsplash;

Opposite page: Waves crash against cliff, South Africa, Thomas PETRACCO, Unsplash



CHOICE OF APPROACH

The selection of an area-based management approach is highly dependent upon the policies or issues that need to be addressed. For example, large-scale issues, involving a variety of different stakeholders, require approaches that can be used appropriately as frameworks for planning, such as Integrated Coastal Zone Management and Marine Spatial Planning. In some instances, only a single sector needs to be involved, and therefore a sector-

specific area-based management approach can be used independently to address a specific issue. Area-based management approaches can also be used in combination to complement each other. The table below provides an overview of different area-based management approaches and the policy issues for which they can address.

Approach	Description	Illustrative policy issues (non-exhaustive)
Integrated Coastal Zone Management (ICZM)	<p><i>“Integrated Coastal Zone Management’ (ICZM) means a dynamic process for the sustainable management and use of coastal zones, taking into account at the same time the fragility of coastal ecosystems and landscapes, the diversity of activities and uses, their interactions, the maritime orientation of certain activities and uses and their impact on both the marine and land parts” (Protocol on Integrated Coastal Zone Management in the Mediterranean, 2009, Art. 2(f)).</i></p> <p>Applicability: This approach aims to manage the activities of two or more sectors in a specific coastal area. Integrated Coastal Zone Management can be used as a framework approach, under which specific sector-focused approaches, such as Marine Protected Areas and fisheries closures, can be used as sub-management approaches.</p> <p>Integrated Coastal Zone Management would be appropriate to address issues such as land-based sources of pollution, coastal development and the expansion of coastal tourism.</p>	<p>Integrated Coastal Zone Management (ICZM) and Marine Spatial Planning (MSP) can be used for similar policies. Integrated Coastal Zone Management (ICZM) includes an additional transitional focus, addressing the transition between terrestrial and marine areas.</p> <ul style="list-style-type: none"> • Development planning and cumulative impact management • Biodiversity conservation • Coordination across multiple sectors
Marine Spatial Planning (MSP)	<p><i>Marine Spatial Planning (MSP) is a public process of analysing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic, and social objectives that are usually specified through a political process” (Ehler & Douvère, 2009).</i></p> <p>Applicability: Marine Spatial Planning (MSP) aims to manage the activities of two or more sectors in a specific marine area. Where rationalisation or prioritisation of activities is required, MSP can provide a framework for</p>	<ul style="list-style-type: none"> • Conservation and sustainable management of natural resources to maximise economic gain • Sustainability of marine and coastal resources

Approach	Description	Illustrative policy issues (non-exhaustive)
Marine Spatial Planning (MSP) cont.	coordinated cross-sectoral planning. MSP could also be applied as an overarching framework to guide and ensure complementarity between marine management approaches addressing smaller-scale issues. For example, a Marine Spatial Planning framework can facilitate the mapping and zoning of different activities and the engagement of all relevant stakeholders. Sector-specific approaches, such as MARPOL Special Areas for pollution control, can be integrated into such a framework.	<ul style="list-style-type: none"> • Management of cumulative pressures on the marine environment including pollution • Preservation of cultural heritage and support of recreation and tourism
Marine Protected Area (MPA)	<p><i>A clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values (IUCN, 2008).</i></p> <p>Applicability: Marine Protected Areas (MPAs) can address different issues and manage types of activities through zoning approaches. MPAs are often used in combination with other approaches to provide cross-sectoral management. MPAs can be applied to address small-scale issues, such as the conservation of a particular feature or ecosystem process. Large-scale issues could be addressed through the creation of a network of MPAs over a broader area.</p>	<ul style="list-style-type: none"> • Biodiversity conservation • Sustainable management of resources or activities through zoning
Locally-Managed Marine Area (LMMA)	<p><i>A locally-managed marine area (LMMA) is an area of nearshore waters that is actively being managed in a 'local' practitioner context by residing or neighbouring communities and/or families, or being collaboratively managed by both resident communities and local government representatives based in the immediate vicinity of the LMMA. LMMAs are usually 'managed' to achieve local conservation and/or sustainable development objectives (NOAA, 2017b), (LMMA Network, 2016).</i></p> <p>Applicability: Locally-managed marine areas (LMMAs) are appropriate to address relatively small-scale issues at the local level. Inclusion of local communities in management approaches works to include traditional or local knowledge of the area, to foster a sense of ownership and responsibility, and to improve compliance. They can be used independently to address point issues or in combination with other proximate LMMAs to support national policies.</p>	<ul style="list-style-type: none"> • Sustainable use of marine and coastal biodiversity • Climate change adaptation • Food security • Empowerment of local communities

Approach	Description	Illustrative policy issues (non-exhaustive)
MARPOL Special Area	<p><i>“MARPOL [the International Convention for the Prevention of Pollution from Ships] defines certain sea areas as ‘special areas’ in which, for technical reasons relating to their oceanographic and ecological condition and to their sea traffic, the adoption of special mandatory methods for the prevention of sea pollution is required. Under the Convention, these special areas are provided with a higher level of protection than other areas of the sea.” (International Maritime Organization, 2017) Six different types of ‘special areas’ exist, relating to different types of pollution including sewage and emissions (International Maritime Organization, 2017).</i></p> <p>Applicability: A MARPOL Special Area is established under the regulatory framework for shipping activities which is provided by the International Maritime Organization (IMO). Special Areas can be applied on different scales, depending on the scale of shipping pollution, for example an entire sea basin. They can also be used in combination with other sectoral approaches under a cross-sectoral framework such as Marine Spatial Planning.</p>	<ul style="list-style-type: none"> • Marine pollution from shipping industry
Particularly Sensitive Sea Area (PSSA)	<p><i>“A Particularly Sensitive Sea Area is an area that needs special protection through action by the International Maritime Organisation (IMO) because of its significance for recognized ecological or socio-economic or scientific reasons and which may be vulnerable to damage by international maritime activities” (IMO, 2006).</i></p> <p>Applicability: PSSAs are established through the regulatory framework for the shipping industry created by the International Maritime Organization. PSSAs are applicable for addressing issues relating to the adverse impacts of international shipping activities on ecosystems and biodiversity. Dedicated Associated Protective Measures are applied within the PSSA designation to manage shipping activities and reduce adverse impacts.</p>	<ul style="list-style-type: none"> • Shipping management • Biodiversity conservation
Fisheries closure	<p><i>“In a fishery management system, the closure to fishing by particular gear(s) of an entire fishing ground, or a part of it, for the protection of a selection of the population (e.g. spawners, juveniles), the whole population or several populations. The closure is usually seasonal, but could be permanent” (Food and Agriculture Organisation, 2014).</i></p>	<ul style="list-style-type: none"> • Resource management • Fisheries productivity • Biodiversity conservation

Approach	Description	Illustrative policy issues (non-exhaustive)
Fisheries closure <i>cont.</i>	<p>Applicability: Fisheries closures are applicable to policies relating to fisheries management and sustainable resource use. Closures to certain types of fishing are also particularly useful to protect certain habitats, for example seagrass beds. An example of a closure in Areas Beyond National Jurisdiction is a Vulnerable Marine Ecosystems (VME), a type of seabed closure which is implemented by the Regional Fishery Management Organisations (RFMO).</p>	

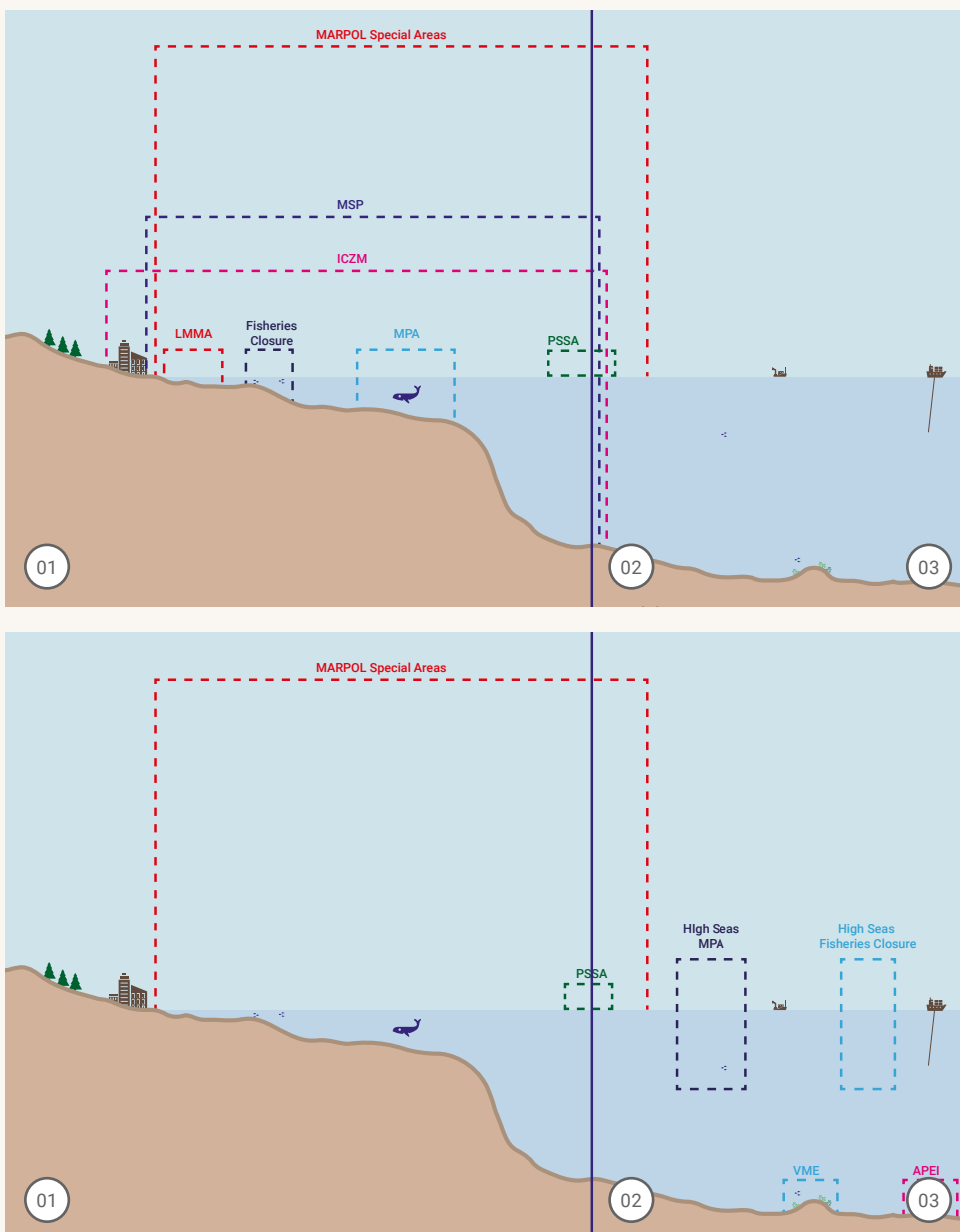


Figure 5 Illustration of the spatial coverage of the area-based management approaches examined in this review. Two separate illustrations are provided denoting the application of different approaches within different jurisdictional contexts.

- 01 Continental Shelf
- 02 Extended Continental
- 03 The Area

ENABLING CONDITIONS SUPPORTING THE DELIVERY OF AN AREA-BASED MANAGEMENT APPROACH

A number of enabling conditions will support the application of an area-based management approach. The following enabling conditions have been identified which were highlighted as supporting more successful application of area-based management approaches. Further detail is provided in the Technical Report.



LEGAL FRAMEWORKS AND VOLUNTARY COMMITMENTS

Both legal and non-binding frameworks can support the implementation of area-based management approaches. Legal frameworks can support compliance with management measures and provide increased resource management authority. The design of the approach is dependent upon the legal or voluntary framework through which it is being applied. Voluntary agreements can provide a foundation on which to build trust and buy-in.



INSTITUTIONAL FRAMEWORKS AND GOVERNANCE

Organisational leadership and coordination of area-based management approaches requires a leadership mandate, and dedicated financial, human and technical capacity. A dedicated institution can be established, or identified from existing institutions. A number of institutional elements have been found to support planning and management processes. Example elements include, leadership, technical skills, a legal mandate and collaboration mechanisms.



AVAILABILITY OF FUNDING AND HUMAN CAPACITY

Stable funding underpins the long-term sustainability of an area-based management approach. Funding can originate from a number of sources, depending on contextual factors, such as location and national policy priorities.

Adequate financial, human and technological capacity is required across a range of components of area-based management approaches to support their implementation. Capacity requirements vary significantly across approaches or different stages of an approach.



MANAGEMENT PLANNING (OR EQUIVALENT)

A fundamental element of many area-based management approaches is the development of a management plan to guide management measure implementation. Comprehensive management plans are key to enhancing the contributions of area-based management approaches to policy. Key elements include the identification of specific indicators to track effectiveness, clarity in the necessary roles and responsibilities and sources of funding.



TRUST

Trust underpins the relationships that are key to successful planning processes. Effective planning depends upon accurate information regarding human-environment interactions within an area. Stakeholders must feel able to trust planning organisations, as sensitive information may be required to develop area-based plans in line with local cultural, economic and ecological contexts. Planning approaches may alter access to particular areas or resources, and maintaining trust between the planning organisation and stakeholder ensures that actions are appropriate and sustainable.



Above: donna zanzibarina, South Africa, Michele Pautasso, Adobe Stock

CONCEPTUAL GUIDANCE FOR AREA-BASED MANAGEMENT APPROACH IMPLEMENTATION TO SUPPORT THE DELIVERY OF SUSTAINABLE DEVELOPMENT GOAL TARGETS

Conceptual guidance has been developed to support understanding of how area-based management approaches can support the delivery of SDG Targets. The Conceptual Guidance is illustrated with a summary of how two Sustainable Development Goal Targets can be delivered through the application of Marine Spatial Planning (MSP) and Integrated Coastal Zone Management (ICZM). The focus of the guidance is on **SDG Target 14.1 and 14.2**, detailed below.

The guidance presents a pathway demonstrating how area-based management approaches can be implemented

to deliver upon national policies that would also align with the delivery of these two Targets. The conceptual guidance considers key attributes, described previously in Figure 4, as well as various enabling conditions for successful approach application, which have been drawn from real world experiences. The conceptual guidance has been created as a pathway diagram (Figure 7), summarised here and provided in more detail in the separate Conceptual Guidelines document⁵.

14.1



By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution

14.2



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

5. Further information on the development of the conceptual guidance, the full detailed case studies and the two separate pathways illustrating both Marine Spatial Planning and Integrated Coastal Zone Management can be found at: (wcmc.io/oceansdgs_conceptualguidelines)

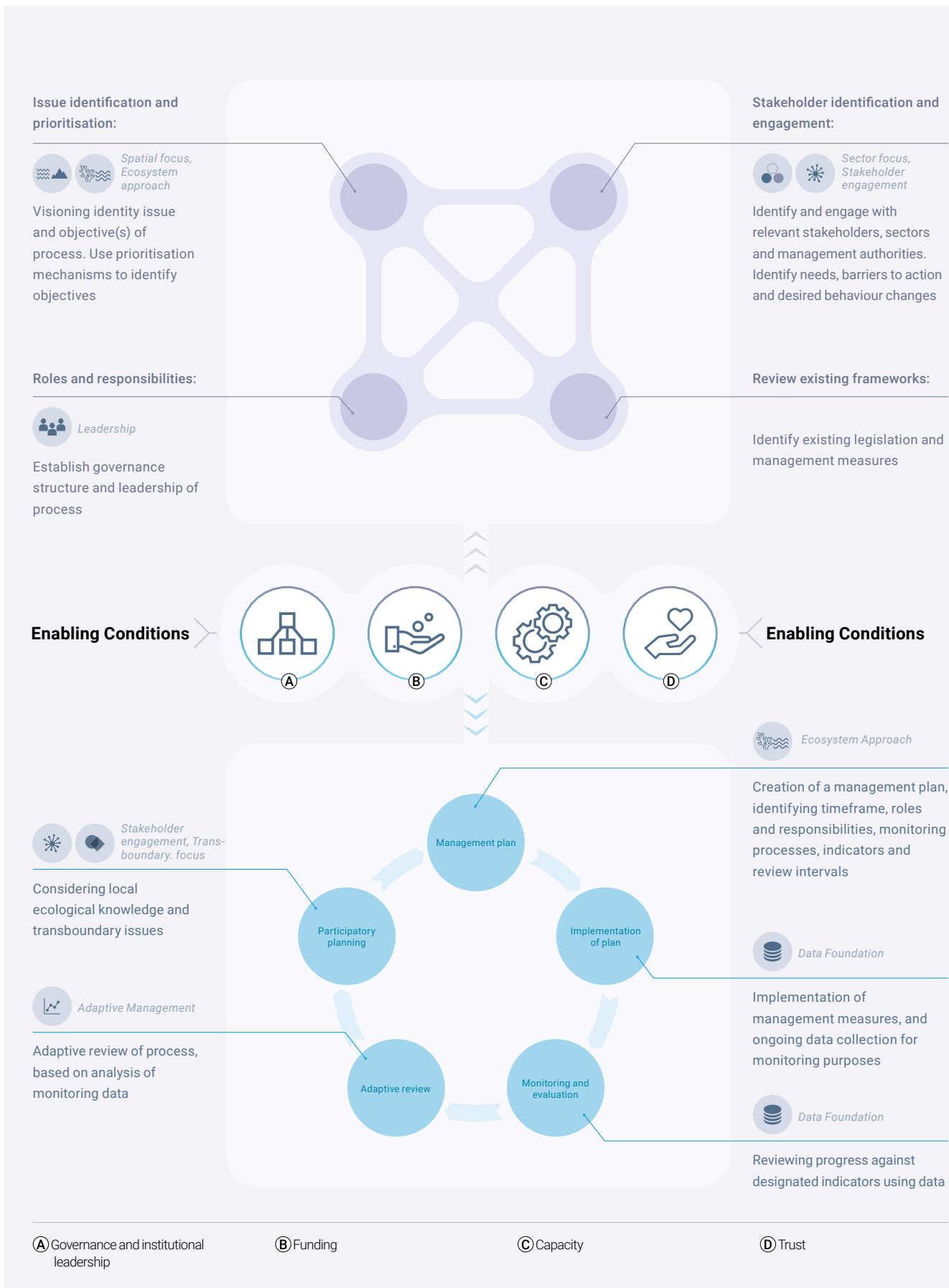




Figure 6 Summary conceptual guidance pathway for the delivery of Targets 14.1 and 14.2 using Marine Spatial Planning or Integrated Coastal Zone Management

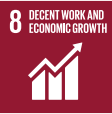

Phase	Case study example
Issue identification and prioritisation	<p>In Xiamen City, the Fujian Province of China, pollution from clothing production, refuse discharge and agriculture were all causing a significant adverse impact on the marine environment. To tackle this problem, an Integrated Coastal Zone Management plan was implemented in 1994. The 'Xiamen Model' has been identified as an example of a successful Integrated Coastal Zone Management approach. It addressed the impact of land-based pollution on the marine environment by establishing water quality policies to reduce the discharge of waste water from land, resulting in a decrease in coastal eutrophication.</p> <p>The timescale for the management of the issue in question is an important consideration. The countries around the Baltic Sea gave the political mandate for cooperation and knowledge exchange, emphasising the importance of the ecosystem-approach to Marine Spatial Planning. This mandate supports long-term sustainable management by ensuring regular information exchange which underpins adaptive management.</p>
Stakeholder identification and engagement	<p>In Indonesia, the national government requires provincial governments to identify relevant stakeholders from coastal communities, businesses, universities and NGOs in their region to participate in area-based management. A process is then undertaken to engage stakeholders via a consultative forum for Marine Spatial Planning. This encourages input from a range of stakeholders, offering them the opportunity to formally engage with the planning process.</p>
Roles and responsibilities	<p>During the Integrated Coastal Zone Management process in the Philippines, authority to approve area-based management plans was assigned to local government. This is an example of a local jurisdiction accepting responsibility for the management of a particular issue, allowing planning and management approaches to be tailored to the region.</p> <p>A key factor of success in Indonesia is a clear management mechanism, with roles and responsibilities detailed in Marine Spatial Planning regulation. The process is overseen by the President's office and monthly progress reports from the leading agency in each province (e.g. planning agency, environment agency) to the secretary of the President are required by clearly defined deadlines.</p>
Review existing frameworks	<p>National level frameworks and monitoring programmes are currently under review in Montenegro, and the annual assessment of the state of the marine environment has helped to identify gaps and priorities in achieving policy targets. As such a National Action Plan for the reduction of pollution from land-based sources has been developed. The plan defines specific measures for implementation, as well as an investment portfolio comprising eight projects to continue this work.</p>
Participatory planning	<p>In the Philippines, local communities were directly involved in the Integrated Coastal Zone Management planning process via workshops, consultation sessions, village meetings and formal meetings at the local government level. This helped to ensure a high level of understanding of the regulations, community buy-in and increased compliance.</p> <p>Participatory mapping was undertaken as part of the Marine Spatial Planning process in Indonesia. The results of planning workshops were sent to a Marine Spatial Planning Working Group to ensure that the regulations do not have detrimental social or economic ramifications.</p>



Phase	Case study example
Management plan	In China , management plans are tailored to the needs of the target area by the relevant local government authorities. This allows their needs to be more specifically addressed in the management measures, such as tackling pollution from oil in Shandong Province, and protecting mangroves in southern China.
Implementation of management plan	In order to overcome limited capacity for data collection in Montenegro , efforts have been made to bring together existing processes and utilise existing frameworks and monitoring programmes. This has supported the coordination of activities and reduced duplication of effort. For example, a lack of baseline data is being actively addressed through the development of a cross-institutional database, and is expected to aid coordination greatly. Data collection methodologies have also been revised in order to collect higher quality and more useful data, drawing on knowledge from existing national efforts.
Monitoring and evaluation	In China , Xiamen Municipal Government and Xiamen University jointly developed the Xiamen Bay Marine Environmental Monitoring System in 2015. Consequently, this facilitated the automatic monitoring of environmental conditions of Xiamen's coastal waters and sharing of real time data between government agencies.
Adaptive review	<p>As part of the Integrated Coastal Zone Management strategy for Montenegro, a comprehensive ecosystem approach was undertaken in a localised, pilot area of Boka Kotorska Bay. This site was selected as it exhibits characteristics of a vulnerable marine zone with unique natural and cultural value which is under strong human pressures. Building upon the lessons and experiences gained from this pilot area, this ecosystem approach will then be applied in the implementation of the second component of the project in Albania and Montenegro: "Implementation of the Ecosystem Approach in the Adriatic Sea through Marine Spatial Planning" (GEF Adriatic project).</p> <p>Integrated Coastal Zone Management plans in the Philippines are reviewed on an annual basis. Yearly revision of the programs is aligned with the local government's planning and budgeting cycle. As such, plan revisions are planned into annual budgets, increasing the financial sustainability of the programs.</p>



SUPPLEMENTARY DETAILS

A list of Sustainable Development Goals assessed as part of this work

Target	Target Description
	
SDG 1: End poverty in all its forms everywhere	
1.1	By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day
1.2	By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions
1.3	Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable
1.4	By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance
1.5	By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters
	
SDG 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture	
2.1	By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round
2.2	By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons
2.5	By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed

Target	Target Description
	SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
8.1	Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries
8.3	Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services
8.4	Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programmes on sustainable consumption and production, with developed countries taking the lead
8.5	By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value
8.9	By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products
	SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable
11.1	By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums
11.2	By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons
11.3	By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries
11.4	Strengthen efforts to protect and safeguard the world's cultural and natural heritage
11.5	By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations
11.6	By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management

Target	Target Description
11c	Support least developed countries, including through financial and technical assistance, in building sustainable and resilient buildings utilizing local materials
 SDG 12: Ensure sustainable consumption and production patterns	
12.1	Implement the 10-year framework of programmes on sustainable consumption and production, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries
12.2	By 2030, achieve the sustainable management and efficient use of natural resources
12.3	By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses
12.4	By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment
12.5	By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse
12.6	Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle;
12.a	Support developing countries to strengthen their scientific and technological capacity to move towards more sustainable patterns of consumption and production
 SDG 13: Take urgent action to combat climate change and its impacts	
13.1	Strengthen resilience and adaptive capacity to climate related hazards and natural disasters in all countries
13.2	Integrate climate change measures into national policies, strategies and planning
13.3	Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning
13.a	Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly \$100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible

Target	Target Description
13.b	Promote mechanisms for raising capacity for effective climate change related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities
 SDG 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development	
14.1	By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution
14.2	By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans
14.3	Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels
14.4	By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics
14.5	By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information
14.7	By 2030, increase the economic benefits to Small Island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism
14.b	Provide access for small-scale artisanal fishers to marine resources and markets
14.c	Enhance the conservation and sustainable use of oceans and their resources by implementing international law as reflected in UNCLOS, which provides the legal framework for the conservation and sustainable use of oceans and their resources, as recalled in paragraph 158 of The Future We Want
 SDG 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	
15.9	By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts

Target

Target Description

	<p>SDG 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all</p>
<p>16.7</p>	<p>Ensure responsive, inclusive, participatory and representative decision-making at all levels</p>
	<p>SDG 17: Strengthen the means of implementation and revitalize the global partnership for sustainable development</p>
<p>17.9</p>	<p>Capacity-Building: Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the sustainable development goals, including through North-South, South-South and triangular cooperation</p>
<p>17.16</p>	<p>Multi-stakeholder partnerships: Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the sustainable development goals in all countries, in particular developing countries</p>
<p>17.17</p>	<p>Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships</p>

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